Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 12/16/2010 Reviewed on 12/16/2010

1 Identification of the substance/mixture and of the company/undertaking

· **Product identifier**

· **Trade name: BioPlus**
Biodegradable chain lubricant

· **Article number:** 0781 516 30..
· **Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the preparation** Chain lubrication oil based on vegetable oils.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
ANDREAS STIHL AG & Co.KG
Badstr. 115
D-71336 Waiblingen
Tel: +49(0)7151-26-3237
Fax: +49(0)7151-26-8-3237

Distributed by:
STIHL Incorporated
536 Viking Drive
Virginia Beach, VA 23452
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· **Information department:**
Produktmanagement Forsttechnik
Tel: +49(0)7151-26-3237
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· **Emergency telephone number:**
Tel: +49-621-60-43333
Fax: +49-621-60-92664

2 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Chain lubrication oil based on vegetable oils, additivated.

· **Dangerous components:** Void
· **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void
· **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of international guidelines.
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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Trade name: BioPlus
Biodegradable chain lubricant

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· **Label elements**

· **Labelling according to EU guidelines:**
The product is not subject to identification regulations according to directives on hazardous materials.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

4 First aid measures

· **Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** Do not induce vomiting; immediately call for medical help.

5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
· **Advice for firefighters**
· **Protective equipment:** Wear breathing protection if necessary.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Particular danger of slipping on leaked/spilled product.
The usual precautionary measures should be adhered to general rules for handling chemicals.
· **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.

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Trade name: BioPlus
Biodegradable chain lubricant

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· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, universal binders) and disposal in suitable containers.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Storage in a collecting room is required.

8 Exposure controls/personal protection

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:** Not required.
· **Protection of hands:**
Not required.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Goggles recommended during refilling.

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
Form: Fluid

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Trade name: BioPlus
Biodegradable chain lubricant

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Color:	Brown
· **Odor:**	Specific type
· **Change in condition**	
Melting point/Melting range:	-2 bis-10°C (28 bis14°F)
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	> 230°C (> 446°F) (DIN ISO 2592)
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Density at 15°C (59°F):**	0.92 g/cm³ (7.677 lbs/gal) (DIN 51757)
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic at 20°C (68°F):	37 mm²/s (ASTM D 7042)
· **Solvent content:**	
Organic solvents:	0.0 %
Water:	0.0 %
VOC content:	0.0 %

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:

*
12 Ecological information

· **Toxicity**
· **Acquatic toxicity:** No further relevant information available.

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Trade name: BioPlus
Biodegradable chain lubricant

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· **Persistence and degradability**
· **Other information:**
The product is readily biodegradable (OECD 301B / EU C.4-C).
Award to the environmental label "Blauer Engel" for quickly biodegradable chain lubricants used for power saws by the German Institute for Quality Assurance and Labelling (RAL).
· **Additional ecological information:**
· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
The waste code numbers mentioned are recommendations based on the probable use of the product.
The product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility.

· **Uncleaned packagings:**
· **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

· **DOT regulations:**
· **Hazard class:** No hazardous good

· **Land transport ADR/RID (cross-border):**
· **ADR/RID class:** No hazardous good.

· **Maritime transport IMDG:**
· **IMDG Class:** No hazardous good
· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**
· **ICAO/IATA Class:** Not Restricted

· **Special precautions for user** Not applicable.

· **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

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Trade name: BioPlus
Biodegradable chain lubricant

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· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **AGW (German Maximum Workplace Concentration)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Product related hazard informations:**
The product is not subject to identification regulations according to directives on hazardous materials.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:**
The safety data sheets were drawn up in cooperation with the Umweltkanzlei Dr. Rhein Beratungs- und Prüfgesellschaft mbH, Phone: +49(0)5066-900990.

· *** Data compared to the previous version altered.**

STIHL BIO-PLUS BAR & CHAIN LUBRICANT

Packaged for Stihl Incorporated, 536 Viking Drive, Virginia Beach, VA 23452

Safety Data Sheet

Conforms to HCS 2012 (29 CFR 1910.1200)

Section 1. Identification

Product identifier

Product Name: **STIHL BIO-PLUS BAR & CHAIN LUBRICANT**

Other names: F74, Vegetable oil based, bio-degradable chain lubricant.

Part/Product Number(s): **0781-516-5009,** 0781-516-5910, **0781-516-5011**, **0781-516-5012, 0781-516-5014,** 0781-516-5010, **7010-871-0172**, 7010-871-0213

Material Use: Bar & chain lubricant.

Uses advised against: Not for internal motor use.

Manufacturer:
Omni Specialty Packaging, LLC
10399 Hwy 1 South
Shreveport, LA 71115
1-318-524-1100

Issuing date: May 21, 2015

Revision date: June 2, 2015

Revision number: 001

Company contact: OMNI EHS Department; E-Mail: sds@osp.cc; Contact phone: 318-524-1100
(Monday-Friday, 8:00 AM – 4:00 PM, CST)

In case of emergency:
CHEMTREC: Within USA and Canada: 1 (800) 524-9300 (24/7)
CHEMTREC Outside USA and Canada: +1 703-527-3887 (24/7)

Section 2. Hazards Identification

OSHA/HCS Status: This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Classification of the substance or Mixture: Not classified

GHS Label Elements

Hazard pictograms: None

Signal word: None

Hazard statement: None

Precautionary statements

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention: Not applicable

Response: Not applicable

Storage: Not applicable

Disposal: Not applicable

Hazards not otherwise classified (HNOC): Defatting to the skin.

Other information: None

Section 3. Composition/Information on Ingredients

Vegetable oil base lubricant stock with proprietary performance additives mixture.

Substance/mixture: Mixture

Components Name	CAS number	Weight %*
Base Oil: Vegetable oil	Various	80 – 100
2-Cycle Engine Oil Additives Mixture	Proprietary	0 – 20

This product does not contain known hazardous materials at the ≥ 1% level or known carcinogens at the ≥ 0.1% level as defined by 29 CFR 1910.1200.

* The exact percentage of composition has been withheld as a trade secret.

Section 4. First Aid Measures

Description of necessary first aid measures

General Advice: No specific first aid measures are required. Get medical attention if irritation develops and persists.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if irritation develops and persists.

Skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation or allergic reaction develops and persists.

Inhalation: In case of inhalation of decomposition products in a fire, symptoms may be delayed. If inhaled, remove to fresh air. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.

Ingestion: Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Most Important Symptoms and Effects: Personnel with pre-existing skin disorders should avoid contact with this product. Under normal use conditions, no adverse effects to health are known.

Eye contact: Not expected to cause prolonged or significant eye irritation.

Skin contact: Contact with skin is not expected to cause prolonged or significant irritation. Contact with skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Inhalation: Not expected to be harmful if inhaled. Contains vegetable-based oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficult breathing.

Ingestion: Not expected to be harmful if swallowed.

Note to physician: Treat symptomatically.

Section 5. Fire-Fighting Measures

Uniform Fire Code: Class IIIB

Flash Point: 220°C (428°F)

Extinguishing Media

Suitable Media: In case of fire, use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water fog, alcohol resistant foam, dry chemical, carbon dioxide (CO2) extinguisher or spray.

Unsuitable Media: CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical: Keep product and empty container away from heat and sources of ignition as product will burn. Contact with strong oxidizers may cause fire. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be contained, prevented from being discharged to any waterway, sewer or drain and disposed of in accordance with local regulations.

Hazardous Combustion Products: Combustion products may include the following: Carbon dioxide (CO2) Carbon monoxide (CO), and Nitrogen oxides.

Protection of Fire Fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Ensure adequate ventilation. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material onto soil or into waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). See Section 12 for ecological information.

Methods and materials for containment and cleaning up

Small Spills: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large Spills: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non- combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

NOTE: If RQ (Reportable Quantity) is exceeded or if spills enter a body of water, report immediately to the USEPA's National Response Center at (800) 424-8802. Check with your local and state regulators regarding their reporting requirements.

Section 7. Handling and Storage

Precautions for safe handling

Protective measures: Safety glasses with side shields. Eye protection and face shield should be used if material

is used under conditions that increase the chances of splattering. Put on appropriate personal protective equipment (see Section 8). Keep out of reach of children.

Advice on general occupational hygiene: Do not get in eyes, on skin or on clothing. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas.
See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, Including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, strong oxidizing agents (see Section 10) and food and drink. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep container tightly closed and sealed until ready for use. Use appropriate containment to avoid environmental contamination. Avoid contaminating soil or releases into sewage or drainage systems and bodies of water.

Section 8. Exposure Controls/Personal Protection

Control parameters

Occupational Exposure Limits

Chemical name	ACGIH		OSHA		NIOSH	
	TLV	STEL	PEL	STEL	TWA	Ceiling
Base Oil: Vegetable oil	-	-	-	-	-	-

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Emergency shower and eyewash station.

Environmental exposure controls: Avoid releases into the environment.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection: Wear safety glasses with side shields. A face shield may be necessary under some conditions.

Hand protection: Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Consult your supervisor or Standard Operating Procedure (SOP) for special handling instructions.

Body protection: No protective equipment is needed under normal use conditions. For non-routine tasks, personal protection equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

Respiratory protection: No respiratory protection is normally required. If user operation generates an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from measured concentrations of this material. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Section 9. Physical and Chemical Properties

Appearance	(Typical or Target)
Physical State:	Liquid
Color:	Brown
Odor:	Characteristic
Odor threshold:	Not available
pH:	Not applicable
Boiling Point:	Not available
Flash Point (Closed cup):	>230°C (>446°F)
Pour Point:	Not available
Evaporation rate (Butyl acetate = 1):	Not available
Flammability (solid, gas):	Not applicable. Based on - Physical state
Flammable) Limit in Air	Not available
Vapor pressure:	Not available
Vapor density (Air = 1):	>1
Relative density:	0.92 - 0.93 g/cm3 at 15°C
Solubility:	In soluble in water
Partition coefficient (n-Octanol/water):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity – Kinematic (cSt (mm2/s)@ 40°C):	32.0 to 42.0
Viscosity – Kinematic (cSt (mm2/s) @ 100°C):	Not available
VOC %:	0
Other information:	No other relevant information available.

Section 10. Stability and Reactivity

Reactivity:	Not reactive under normal storage conditions
Chemical stability:	Stable under normal storage conditions
Possibility of hazardous reactions:	None under normal processing.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, flames and sparks.
Incompatible materials:	No further relevant information available.
Hazardous decomposition products:	No dangerous decomposition products known.

Section 11. Toxicological Information

Information on toxicological effects

Basis for Assessment: Information given is based on product data, knowledge of the components and the toxicity of similar products.

Likely Routs of Exposure: Exposure may occur via skin absorption, skin or eye contact, inhalation, ingestion.

Substance/Mixture

Acute Toxicity	Oral LD50	Dermal LD50	Inhalation LC50
Base Oil: Vegetable oil	Not Classified	Not Classified	Not Classified

Aspiration hazard:	Not expected to be an aspiration hazard.
Skin Corrosion/Irritation:	No known significant effects or critical hazards.
Serious Eye Damage/Irritation:	No known significant effects or critical hazards.
Skin Sensitization:	No known significant effects or critical hazards.
Respiratory Sensitization:	No known significant effects or critical hazards.
Specific Target Organ Toxicity (Single Exposure) - STOT-SE:	No known significant effects or critical hazards.
Specific Target Organ Toxicity (Repeated Exposure) – STOT-RE:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.

Germ Cell Mutagenicity: No known significant effects or critical hazards.

Reproductive Toxicity No known significant effects or critical hazards.

Information on Toxicity Effects of Compounds

Lubricant Base Mineral Oil (Petroleum)

Mineral oils are known to cause cancer because of carcinogenic components (e.g. Benzene). The lubricant base mineral oils in this product have been highly refined by a variety of processes including severe solvent extraction, severe hydro cracking or severe hydro treating to reduce aromatics and improve performance characteristics. The oils in the is product meets the IP-346 criteria of less than 3 percent PHA's and are not considered to be a carcinogen by the International Agency for Research on Cancer.

None of the oils in this product requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IRAC) as: carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

Section 12. Ecological Information

The information is based on data available for the material, the components of the material, and similar materials.

Ecotoxicity: No further relevant information is available.

Mobility: Vegetable oil component – Low solubility and floats on water and is expected to migrate from water to land. Expected to partition to sediment and wastewater solids.

Persistence and degradation

Biodegradation: The material is expected to be readily biodegradable.

Other information: 93.8% biodegradable in 21 days.

Bioaccumulative potential

Bioaccumulation: This product is not expected to bioaccumulate through food chain in the environment.

Other adverse effects: No further relevant information is available.

Other ecological information: Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

Section 13. Disposal Considerations

Disposal recommendations based on material supplied.

Waste treatment methods: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Consult the appropriate state, regional, or local regulations for additional requirements. The generation of waste should be avoided or minimized wherever possible.

Product waste: Significant quantities of waste product residues should not be disposed of via the sanitary sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Suitable for recycling with a used oil recycling service.

Contaminated packaging: Empty containers or liners may retain some product residues and could pose a potential fire hazard. Do not cut, puncture, or weld containers.

Other information: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport Information

General information: Vegetable based lubricating oil - Not regulated.

	DOT Classification	IMDG	IATA

Stihl Bio-Plus Bar & Chain	Not Regulated	Not Regulated	Not Regulated

Special precautions for user: Transport within user's premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

United States Regulations

United States Inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304: No products were found.

SARA 311/312:

Immediate (Acute) Health Effects:	No
Delayed (Chronic) Health Effects:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No

SARA 313:
The following components of this material are found on the EPCRA 313 list:
None

Supplier notification: This product does not contain any hazardous ingredients at or above regulated thresholds.

CWA (Clean Water Act): This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA: This material, as supplied, does not contain any substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

State Regulations

Massachusetts: None of the components are at or above regulated thresholds.
New Jersey: None of the components are at or above regulated thresholds.
Pennsylvania: None of the components are at or above regulated thresholds.
California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause cancer.
None

Canada

WHMIS Hazard Class: Not regulated.

International Chemical Inventories:
All components comply with the following chemical inventory requirements: DSL (Canada)

Section 16. Other Information

NFPA Rating:	**Health Hazard – 0**	**Flammability – 1**	**Instability/Reactivity – 0**
HMIS Rating:	**Health Hazard – 0**	**Flammability – 1**	**Physical Hazards – 0**

(NFPA & HMIS Hazard Rating Key: 0 - Minimum Hazard; 1 - Slight Hazard; 2 - Moderate Hazard; 3 - High Hazard; 4 - Extreme Hazard; * - Chronic Hazard Indicator, & PPE - Personal Protective Equipment Index A to L. These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS or Hazardous Material Identification System).

Key to abbreviations:
OSHA = Occupational Safety and Health Administration
ACGIH= American Conference of Industrial Hygienists
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service Registry Number
cSt = Centistroke (mm2/s)
GHS = Global Harmonized System of Classification and Labeling Of Chemicals.
LogPow = logarithm of the octanol/water partition coefficient
OEL = Occupational Exposure Limit
SDS = Safety Data Sheet
STEL = Short term exposure Limit
UN = United Nations
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transportation of Dangerous Goods

IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods

Prepared By: **OMNI Specialty Packaging EH&S Department**

Revision Date: **May 21, 2015**

Status: **Final**

Revision Note: **Revision 001 of OSHA GHS SDS Format.**

Consumer Product Improvement Act of 2008, General Conformity Certification

For Consumer Product Packages: This product has been evaluated and is certified to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission. Where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No testing is required to certify compliance with the provisions. The date of the manufacturing is stamped on the product container.

Disclaimer

All reasonably practicable steps have been taken to ensure the information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This information is furnished upon condition that the person receiving it shall make their own determination of the suitability of the material for their particular purpose.

End of Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	ESPLANADE® 200 SC
Product code (UVP)	79930208
SDS Number	102000023686
EPA Registration No.	432-1516

Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer Environmental Science A division of Bayer CropScience LP 500 Centregreen Way, Suite 400 Cary, NC 27513 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com
Emergency telephone no.	
Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Specific target organ toxicity - repeated exposure: Category 2
Specific target organ toxicity - single exposure: Category 2

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Warning

Hazard statements
May cause damage to organs (Nervous system) through prolonged or repeated

exposure if swallowed.
May cause damage to organs (Nervous system) if swallowed.

Precautionary statements
Do not breathe spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Indaziflam	950782-86-2	19.05

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Eye contact
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms
No symptoms known or expected.

Indication of any immediate medical attention and special treatment needed

Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx)

Advice for firefighters

Special protective equipment for firefighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	> 100 °C No flash point - Determination conducted up to the boiling point.
Auto-ignition temperature	> 500 °C / > 932 °F The product is not self-ignitable.
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Indaziflam	950782-86-2	0.56 mg/m3 (TWA)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Chemical resistant nitrile rubber gloves

Eye protection	Safety glasses with side-shields
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white
Physical State	suspension
Odor	characteristic
Odour Threshold	No data available
pH	9.0 - 10.0 (100 %) (23 °C)
Viscosity, kinematic	113 mm²/s20 °CShear rate of 20/sec 98 mm²/s40 °CShear rate of 20/sec 57 mm²/s20 °CShear rate of 100/sec 40 mm²/s40 °CShear rate of 100/sec
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Specific Gravity	1.051 (20 °C) 1.044 (40 °C)
Density	ca. 1.05 g/cm³ (20 °C)
Evaporation rate	No data available
Boiling Point	No data available
Melting / Freezing Point	No data available
Water solubility	dispersible
Minimum Ignition Energy	Not applicable
Decomposition temperature	Stable under normal conditions.
Self-accelarating decomposition temperature (SADT)	No data available
Partition coefficient: n-octanol/water	No data available
Viscosity	30 - 75 mPa.s (20 °C) Velocity gradient 100 /s 80 - 180 mPa.s (20 °C) Velocity gradient 20 /s
Flammability	No data available

Oxidizing properties	No oxidizing properties
Flash point	> 100 °C No flash point - Determination conducted up to the boiling point.
Auto-ignition temperature	> 500 °C / > 932 °F The product is not self-ignitable.
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
Particle size	No data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Inhalation, Skin Absorption, Ingestion
Immediate Effects	
Eye	May cause slight irritation.
Skin	Harmful if absorbed through skin.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (Rat) > 2,000 mg/kg Test conducted with a similar formulation.

Acute inhalation toxicity	LC50 (Rat) >= 3.624 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration. Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rat) > 2,000 mg/kg Test conducted with a similar formulation.
Skin corrosion/irritation	No skin irritation (Rabbit) Test conducted with a similar formulation.
Serious eye damage/eye irritation	Slight irritant effect - does not require labelling. (Rabbit) Test conducted with a similar formulation.
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig) Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity – single exposure

Indaziflam: May cause damage to organs in nervous system following oral route.

Assessment STOT Specific target organ toxicity – repeated exposure

Indaziflam caused neurobehavioral effects and/or neuropathological changes in subchronic studies in rats and dogs. Indaziflam: May cause damage to organs (Nervous system) through prolonged or repeated exposure.

Assessment mutagenicity

Indaziflam was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Indaziflam was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Indaziflam was not a primary reproductive toxicant in a two-generation study in rats.

Assessment developmental toxicity

Indaziflam did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

Acute toxicity studies have not been performed on this product as formulated.
Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.85 mg/l Exposure time: 96 h Test conducted with a similar formulation.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 149 mg/l Exposure time: 48 h
Toxicity to aquatic plants	EC50 (Skeletonema costatum) 0.603 mg/l Growth rate; Exposure time: 96 h
	NOEC (Skeletonema costatum) 0.125 mg/l Growth rate; Exposure time: 96 h
	EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.750 mg/l Growth rate; Exposure time: 72 h
	EC50 (Lemna gibba (gibbous duckweed)) 0.000712 mg/l Growth rate; Exposure time: 7 d
Biodegradability	Indaziflam: Not rapidly biodegradable
Koc	Indaziflam: Koc: 496
Bioaccumulation	Indaziflam: Bioconcentration factor (BCF) 66 Does not bioaccumulate.
Mobility in soil	Indaziflam: Moderately mobile in soils
Additional ecological information	No other effects to be mentioned.
Environmental precautions	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose in accordance with all local, state/provincial and federal regulations.
Contaminated packaging	Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke. Follow advice on product label and/or leaflet.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR Not dangerous goods / not hazardous material

IMDG

UN number	**3082**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (INDAZIFLAM SOLUTION)

IATA

UN number	**3082**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (INDAZIFLAM SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification:	COMPOUNDS, TREE OR WEED KILLING, N.O.I. other than poison, HAVING A DENSITY OF 20 LBS OR GREATER PER CUBIC FOOT

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1516
US Federal Regulations
TSCA list

Water	7732-18-5
1,2-Propanediol	57-55-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol	57-55-6	MN, RI

None.

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed, inhaled or absorbed through the skin.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 1	Flammability - 1	Instability - 0	Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1	Flammability - 1	Physical Hazard - 0	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification. Section 11: Toxicological Information. Section 12. Ecological information. Section 15: Regulatory information. Reviewed and updated for general editorial purposes.

Revision Date: 05/04/2020

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS:
ALBAUGH, LLC
Ankeny, IA 50021
1-800-247-8013

EMERGENCY TELEPHONE NUMBERS:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night

- Within USA and Canada: 1-800-424-9300 CCN771
- Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

PRODUCT NAME : **GLY STAR PLUS**
CHEMICAL NAME : Isopropylamine Salt of Glyphosate
PRODUCT USE : Herbicide
PRODUCT CODE : EPA Reg. No 42750-61

SECTION 2 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

Clear yellow viscous liquid with slight amine like odor

HEALTH HAZARDS: Warning. Moderately irritating to eyes.

PHYSICAL HAZARDS: May react with metals such as galvanized or mild steel to produce hydrogen gas which could form a highly combustible gas mixture.

ENVIRONMENTAL HAZARDS: Moderately toxic to fish and aquatic pants. May be toxic to non-target plants.

SECTION 3 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER
Isopropylamine Salt of Glyphosate	41.0%	38641-94-0
Inert Ingredients	59.0 %	n/a

SECTION 4 - FIRST AID MEASURES

First Aid responders should use protective equipment in Section 8 if there is a potential for exposure to product.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED: Move person to fresh air, if person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5 - FIRE FIGHTING MEASURES

National Fire Protection Rating (NFPA)

HEALTH	1
FLAMMABILITY	0
REACTIVITY	1
4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

FLASHPOINT: Will not flash.

EXTINGUISHING MEDIA: Use water spray, foam or dry chemical.

FIRE AND EXPLOSION HAZARD: May decompose in fire due releasing irritating or toxic gases including carbon monoxide, nitrogen oxides, phosphorous oxides.

FIRE FIGHTING INSTRUCTIONS: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Foam or dry chemical extinguishing systems recommended to prevent environmental damage due to water run off.

FIRE FIGHTING EQUIPMENT: Self-contained breathing apparatus with full facepiece. Full firefighting turn-out gear (Bunker gear).

SECTION 6 - ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILLS OR LEAKS: Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

SMALL SPILL: Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

LARGE SPILL: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. After removal, scrub the area with detergent and water and neutralize with dilute alkaline solutions of soda ash, or lime.

Do not allow washwaters to enter waterways.

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

HANDLING: Use only in a well-ventilated area. Wear appropriate safety equipment when handling.

STORAGE: Store in original container with lid tightly closed. Keep away from food, feed and drinking water. Store above 15° F (-10 C). If crystallized, warm to 80-90 F and redissolve by shaking container before using product.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS (8 hour TWA, ppm):

COMPONENT	OSHA PEL	ACIGH TLV
Isopropylamine salt of glyphosate	Not Est.	Not Est.

ENGINEERING CONTROLS: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Local mechanical exhaust ventilation may be required. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT:
EYE PROTECTION - Safety goggles when mixing, loading or cleaning equipment is recommended.
CLOTHING – Long-sleeved shirt and long pants, Shoes plus socks,
GLOVES – Waterproof gloves when mixing, loading or cleaning equipment is recommended.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear yellow viscous liquid
Odor: Slight amine like
pH: 4.74
Melting Point: Not applicable
Boiling Point: No data
Flash Point: Will not flash
Evaporation Rate: No data
Flammability: Not flammable
Flammability Limits: Not applicable
Vapor Pressure: 25 mmHg a 24°C
Vapor Density: Not applicable
Density: 1.15 – 1.21 g/ml (9.60 – 10.10 lb/gl)*
Solubility: Emulsifies
Partition Coefficient: log Pow - < 3.2 @ 25°C (glyphosate)
Auto-Ignition Temperature: No data
Decomposition Temperature: No data
Viscosity: 32.77 cSt @ 24°C

*Listed density is an approximate value and does not necessarily represent that of a specific batch.

SECTION 10 - STABILITY AND REACTIVITY

PRODUCT REACTIVITY: May react with metals such as galvanized or mild steel to produce hydrogen gas which could form a highly combustible gas mixture.

CHEMICAL STABILITY: Stable, however may decompose if heated.

HAZARDOUS REACTION/POLYMERIZATION: Product will not undergo polymerization.

CONDITIONS TO AVOID: Avoid temperatures above (115°F, 46°C) and below 25°F (-5°C).

INCOMPATIBLE MATERIALS: Strong oxidizers or bases, mild and galvanized steel.

HAZARDOUS DECOMPOSITION PRODUCTS:. Carbon monoxide, Nitrogen oxides, phosphorous oxides due to thermal breakdown.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD_{50} (rat)	- > 5,000 mg/Kg
Dermal LD_{50} (rat)	- > 5,000 mg/Kg
Inhalation LC_{50} (rat)	- > 2.2 mg/L
Eye Irritation (rabbit)	- Slight to moderate
Skin Irritation (rabbit)	- Slight
Sensitization (guinea pig)	- Non-sensitizer

CARCINOGEN STATUS:

OSHA	- Not listed
NTP	- Not listed
IARC	- 2A*

* Not carcinogenic in rats or mice. Listed as Category 2A by the International Agency for Research on Cancer (IARC) but expert opinion based on weight of evidence is that classification as a carcinogen is not warranted.

DEVELOPMENTAL TOXICITY: Effects on offspring only noted with maternal toxicity

MUTAGENICITY: No evidence of mutagenic effects during *in vivo* or *in vitro* studies.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

ENVIRONMENTAL FATE: (Glyphosate acid)
Bioaccumulation - Whole fish BCF <1
Soil Half-life - 2 - 174 days (adsorbs strongly to soil)
Water Half-life - <7 days

FISH TOXICITY: (Glyphosate acid)
96 hour LC_{50}, Rainbow trout – 5.4 mg/L
96 hour LC_{50}, Bluegill – 7.3 mg/L

AVIAN TOXICITY: (Glyphosate acid)
Dietary LC_{50}, Bobwhite quail – >5.600 mg/Kg
Dietary LC_{50}, Mallard duck – >5,600 mg/Kg

BEE TOXICITY: (Glyphosate acid)
Contact LD_{50} - >100 ug/bee

SECTION 13 - DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures. Emptied container retains vapor and product residue.

CONTAINER: Non-refillable containers: Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Refillable containers: Refill this container with glyphosate only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the re-filler.

If the container cannot be refilled, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

SECTION 14 - TRANSPORT INFORMATION

SHIPPING DESCRIPTION:	Not regulated by DOT
DOT HAZARD CLASS:	N/A
UN NUMBER:	N/A
DOT PACKING GROUP:	III

SECTION 15 - REGULATORY INFORMATION

CERCLA REPORTABLE QUANTITY: Not listed

SARA TITLE III STATUS:
311/312 Hazard Categories – Immediate Health
313 Toxic Chemicals – None known

CALIFORNIA PROP 65: Not listed

TSCA INVENTORY: All components listed on US EPA TSCA Inventory

SECTION 16 - OTHER INFORMATION

HMIS HAZARD RATINGS	HEALTH	1
	FLAMMABILITY	0
	PHYSICAL HAZARD	1
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Albaugh's knowledge. Albaugh makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling.

It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

REVISED DATE: October, 2015

REFERENCE: Revised IARC classification in Section 11

MSDS Revision Date (dd/mm/yyyy): 30/06/2009

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product identifier : **GLYFOS X-TRA HERBICIDE**

Product Code(s) : None reported.

Product Use : Herbicide

Chemical Family : Mixture

Supplier's name and address:

Cheminova Inc.
PO Box 110566
One Park Drive
Research Triangle Park, NC, USA
27709

Manufacturer's name and address:

Refer to Supplier

Information Telephone No. : 919-474-6600 (8:00 AM - 5:00 PM, EST, Monday-Friday)

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).
For Medical Emergencies: (800) 303-6950

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (weight)	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL PEL	OSHA PEL STEL
Glyphosate as isopropylamine salt	**38641-94-0**	30.00 - 60.00	N/Av	N/Av	N/Av	N/Av
Surfactant	**61791-26-2**	5.00 - 15.00	N/Av	N/Av	N/Av	N/Av

Note: This product contains about 480 g/L of the active ingredient Glyphosate as its isopropylamine salt, equivalent to 360 g/L of the free acid Glyphosate (CAS # 1071-83-6).

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear, yellow, viscous liquid. Odorless to slight amine-like odor.
Caution! Reacts with materials made of iron, galvenized steel and unlined steel, releasing flammable hydrogen gas, which may ignite. May cause eye irritation. May cause liver and kidney damage. May cause long-term adverse effects in the environment. Harmful to plants.

POTENTIAL HEALTH EFFECTS

Target organs : Eyes, skin, respiratory system, digestive system.

Routes of exposure : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include coughing and sneezing.

Skin : May cause mild skin irritation. Symptoms may include redness, itching and swelling.

Eyes : May cause moderate eye irritation. Symptoms will include pain, redness and tearing.

Ingestion : No exposure symptoms reported under normal conditions of use. Ingestion of large amounts may cause stomach irritation. Symptoms include nausea, vomiting and diarrhea.

Effects of long-term (chronic) exposure

: Prolonged overexposure may cause liver and kidney effects.

Conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Carcinogenic status : See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : . See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 4 - FIRST AID MEASURES

Inhalation : Immediately remove person to fresh air. If symptoms develop, seek medical attention.

Skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention if symptoms develop and persist. Wash contaminated clothing before re-use.

Eye contact : Immediately flush eyes with running water for at least 15 minutes. Get medical attention.

Ingestion : Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Notes For Physician : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

: Combustible liquid. This material may burn when exposed to extreme heat, flame and other ignition sources. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Reacts with materials made of iron, galvanized steel and unlined steel, releasing flammable hydrogen gas, which may ignite.

Flammability classification (OSHA 29 CFR 1910.1200)

: Combustible Liquid Class III B.

Flash point : >235°F / >113°C

Flash point Method : estimated

Auto-ignition temperature : N/Av

Lower flammable limit (% by vol.) : N/Av

Upper flammable limit (% by vol.) : N/Av

Oxidizing properties : None known.

Flame Projection Length : N/Ap

Flashback observed : N/Ap

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact or static discharge.

Suitable extinguishing media : Carbon dioxide or dry chemical for small fires. For large fires, use water spray or foam.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water spray used for cooling purposes.

Hazardous combustion products

: Carbon oxides; nitrogen oxides (NOx); Oxides of phosphorus; irritating fumes and smoke.

NFPA Rating

: 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: 1 *Flammability:* 1 *Instability:* 0 *Special Hazards:* None

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Spill response/cleanup : Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Sweep up and shovel into suitable containers for disposal. For a water spill, confine the spill immediately with booms. Notify the appropriate authorities as required.

Prohibited materials : None known.

Special spill response procedures

: In case of a transportation accident, in the United States contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).
US CERCLA Reportable quantity (RQ): None known.

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures : This material is a harmful liquid. Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Keep away from heat and flame. This product should be mixed, stored or applied using only stainless steel, fiberglass, plastic, or plastic lined containers and equipment. This product can react with containers made of iron, galvanized steel and unlined steel to produce flammable hydrogen gas. Avoid contact with incompatible materials. Use caution when opening cap. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Storage requirements : Store in a cool, dry, well ventilated area. Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Incompatible materials : Strong oxidizing agents; Alkalies; Iron; Steel (galvanized and unlined).

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering measures

: Provide sufficient ventilation to keep vapour concentration below the given TLV and/or PEL.

Respiratory protection : Not required under normal conditions of handling. In the event of an accidental discharge of the material which produces a heavy vapor or mist, workers should use respiratory protection. NIOSH-approved respirators are recommended. Seek advice from respiratory protection specialists.

Skin protection : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.

Eye / face protection : Safety glasses with side-shields or chemical splash goggles.

Other protective equipment : Wear resistant clothing and boots. An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations

: Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Do not take contaminated clothing home.

Permissible exposure levels : For individual ingredient exposure levels, see Section 2.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Liquid

Appearance : Clear, yellow, viscous liquid.

Odour : Odorless to slight amine-like odor.

Odour threshold : N/Av

pH : 4.5 @ 20°C (1% solution)

Boiling point : 235°F / 113°C

Specific gravity : 1.165 g/cc @ 20°C

Melting/Freezing point : <32°F / <0°C

Coefficient of water/oil distribution : P = 4.5 x 10 -4 (free Glyphosate acid); Log P = -3.3 (free Glyphosate acid)

Vapour pressure (mmHg @ 20° C / 68° F) : 1.75 x 10 -7 mmHg @ 25°C(free Glyphosate acid)

Solubility in water : Miscible

Vapour density (Air = 1) : N/Av

Evaporation rate (n-Butyl acetate = 1) : N/Av

Volatile organic Compounds (VOC's) : N/Av

Volatiles (% by weight) : N/Av

SECTION 10 - REACTIVITY AND STABILITY DATA

Stability and reactivity : Stable under the recommended storage and handling conditions prescribed. Reacts with materials made of iron, galvanized steel and unlined steel, releasing flammable hydrogen gas, which may ignite.

Hazardous polymerization : Will not occur.

Conditions to avoid : Keep this product away from heat, sparks, flame, and other sources of ignition (e.g. pilot lights, electric motors, static electricity). This product should be mixed, stored or applied using only stainless steel, fiberglass, plastic, or plastic lined containers and equipment. This product can react with containers made of iron, galvanized steel and unlined steel to produce flammable hydrogen gas.

Materials To Avoid And Incompatibility

: Incompatible materials (see Section 7).

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicological data : LD50 Oral (rat): >5000 mg/kg
LD50 Dermal (rat): >2000 mg/kg
LC50 Inhalation (rat): >4.86 mg/L/4 hrs

Carcinogenic status : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects : Not expected to have other reproductive effects.

Teratogenicity : Not expected to be a teratogen.

Mutagenicity : Not classifiable as a mutagen.

Epidemiology : Not available.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Synergistic materials : Not available.

Irritancy : May cause eye and skin irritation. May cause irritation to upper respiratory system.

other important hazards : None known.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental effects : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. This product is an herbicide. The active ingredient is: Glyphosate (as isopropylamine salt). The active ingredient is considered to be toxic to many plants, and non-toxic to fish, aquatic invertebrates, soil micro- and macroorganisms, birds, mammals and insects.

Important environmental characteristics

: The active ingredient is rapidly deactivated by absorption to clay particles. The active ingredient binds strongly to soil. The active ingredient is not readily biodegradable. It undergoes slow degradation in the environment and in waste water treatment plants. No adverse effects are found at concentrations up to 100 g/L in waste water treatment plants. Degradation is mainly microbiological. Aerobic degradation is most important, but anaerobic degradation does also occur. The risk of bioaccumulation is considered to be low.

Ecotoxicological : The acute toxicity of the product is measured to be:
Fish - 96-Hr LC50, Rainbow trout (Salmo gairdneri) = 18.6 mg/L (static)
21-day NOEC, Rainbow trout (Salmo gairdneri) = 0.43 - 0.81 mg/L
96-Hr LC50, Bluegill sunfish (Lepomis macrochirus) = 11.9 mg/L (static)
Invertebrates - 48-Hr EC50, Daphnids (Daphnia magna) = 21.6 mg/L
21-day NOEC, Daphnids (Daphnia magna) = 1.5 mg/L
Algae - 72-Hr IC50, Green Algae (Scenedesmus subspicatus) = 17.4 mg/L
96-Hr IC50, Green Algae (Scenedesmus subspicatus) = 2.2 mg/L
Plants: 7-day EC50, Duckweed (Lemna gibba) = 27 mg/L
Earthworms: 14-day LC50, (Eisinia foetida) = >1000 mg/kg dry soil
Birds: LD50, Japanese quail (Coturnix japonica) = 1900 mg/kg
5-day dietary LD50, Japanese quail (Coturnix japonica) = >5000 ppm in feed
Bees - 48-Hr LD50, Worker honey-bees (Apis mellifera), acute oral = >100 µg/bee
24-Hr LD50, Worker honey-bees (Apis mellifera), topical = >20 µg/bee
Bacteria: IC50, Activated sludge = >100 mg/kg

SECTION 13 - DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle waste according to recommendations in Section 7.

Methods of Disposal : Do not contaminate water, foodstuffs, feed or seed by storage or disposal. For disposable containers, triple rinse (or equivalent) containers and add rinse material to disposal tank. Follow any additional local, state or federal requirements for cleaning containers prior to disposal. Make the empty, rinsed container unsiutable for further use by puncturing. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

MSDS Revision Date (dd/mm/yyyy): 30/06/2009

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 - TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
49CFR/DOT	None	Not regulated.	Not regulated	none	
49CFR/DOT Additional information	None.				
TDG	None	Not regulated.	Not regulated	none	
TDG Additional information	None.				

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): Refer to supplier

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes:Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

US State Right to Know Laws:

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

International Information:

This product is a Pest Control Product and is not regulated as a Controlled Product under the Hazardous Products Act (HPA). For informational purposes, this product would have the following WHMIS classification:

Class D2B (Materials Causing Other Toxic Effects, Toxic Material)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

SECTION 16 - OTHER INFORMATION

HMIS Rating : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: *2 *Flammability:* 1 *Reactivity:* 0

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Ap: Not Applicable

N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TPQ: Threshold Planning Quantity
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices
2. International Agency for Research on Cancer Monographs
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases (Chempendium, HSDB, RTECs).
4. Material Safety Data Sheet from manufacturer.
5. US EPA Title III List of Lists
6. California Proposition 65 List

Prepared for: Cheminova Inc PO Box 110566 One Park Drive, Suite 150 Research Triangle Park, NC 27709 Please direct all enquiries to Cheminova.	
Prepared by: ICC The Compliance Center Inc. **Canada: 1-888-977-4834** **USA: 1-888-442-9628** http://www.thecompliancecenter.com	The Compliance Center Inc. HAZARDOUS MATERIALS REGULATIONS SPECIALISTS

DISCLAIMER OF LIABILITY

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MSDS Preparation Date (dd/mm/yyyy)
: 19/08/2003

MSDS Reviewed Date (dd/mm/yyyy)
: 30/06/2009

Revision No. : 3

Revision Information : (M)SDS sections updated: All

END OF DOCUMENT

Honcho® Plus Herbicide

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Honcho® Plus Herbicide
EPA Reg. No.: 524-454
Chemical name: Not applicable
Synonyms: None
Company: MONSANTO COMPANY, 800 N. Lindbergh Blvd., St. Louis, MO, 63167
Telephone: 1-800-332-3111, **Fax:** 314-694-5557
Emergency numbers
FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted).
FOR MEDICAL EMERGENCY - Day or Night: 314-694-4000 (collect calls accepted).
Version: 1.0
Effective date: 02-05-2002

2. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient
Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}
Composition

COMPONENT	CAS No.	% by weight (approximate)
Isopropylamine salt of glyphosate	38641-94-0	41
Other ingredients		59

Trade secret composition.
OSHA Status
This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

Emergency overview
Appearance and odour (colour/form/odour): Amber - Brown / Liquid / Slight
WARNING!
CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY
HARMFUL IF SWALLOWED
HARMFUL IF INHALED
Potential health effects
Likely routes of exposure
Skin contact, eye contact, inhalation
Eye contact, short term
Causes temporary eye irritation.
Skin contact, short term
Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation, short term
Harmful by inhalation.
Single ingestion
Harmful if swallowed.
Causes gastrointestinal tract irritation.
Refer to section 11 for toxicological and section 12 for environmental information.

4. FIRST AID MEASURES

Eye contact
If in eyes, hold eye open and rinse gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.
Skin contact
Immediately wash affected skin with plenty of water.
Take off contaminated clothing, wristwatch, jewellery.
Wash clothes before re-use.
Inhalation
Remove to fresh air.
If not breathing, give artificial respiration.
Get medical attention.
Ingestion
Immediately offer water to drink.
Get medical attention.
Never give anything by mouth to an unconscious person.
Advice to doctors
This product is not an inhibitor of cholinesterase.
Antidote
Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

Flash point
None.
Unusual fire and explosion hazards
Minimise use of water to prevent environmental contamination.
Environmental precautions: see section 6.
Hazardous products of combustion
Carbon monoxide (CO), nitrogen oxides (NOx), phosphorus oxides (PxOy)
Fire fighting equipment
Self-contained breathing apparatus.
Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protection recommended in section 8.
Environmental precautions
SMALL QUANTITIES:
Low environmental hazard.
LARGE QUANTITIES:
Minimise spread.
Contain spillage with sand bags or other means.
Keep out of drains, sewers, ditches and water ways.
Methods for cleaning up
SMALL QUANTITIES:
Flush spill area with water.
LARGE QUANTITIES:
Absorb in earth, sand or absorbent material.
Dig up heavily contaminated soil.
Collect in containers for disposal.
Refer to section 7 for types of containers.
Flush residues with small quantities of water.
Minimise use of water to prevent environmental contamination.
Refer to section 13 for disposal of spilled material.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.
Handling
Avoid contact with eyes, skin and clothing.
Avoid breathing vapour or mist.
Wash hands thoroughly after handling or contact.
Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
Wash contaminated clothing before re-use.
Thoroughly clean equipment after use.
Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.
Emptied containers retain vapour and product residue.
Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.
Storage
Compatible materials for storage: stainless steel, aluminium, fibreglass, plastic, glass lining
Incompatible materials for storage: galvanised steel, unlined mild steel, see section 10.
Keep out of reach of children.
Keep away from food, drink and animal feed.
Keep only in the original container.
Minimum shelf life: 5 years.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

Engineering controls
Have eye wash facilities immediately available at locations where eye contact can occur.
Eye protection
If there is potential for contact:
Wear chemical goggles.
Applicators and other handlers must wear eye protection.
Skin protection
No special requirement when used as recommended.
If repeated or prolonged contact:
Wear chemical resistant gloves.
Respiratory protection
If airborne exposure is excessive:
Wear respirator.
Full facepiece/hood/helmet respirator replaces need for chemical goggles.
Respiratory protection programs must comply with all local/regional/national regulations.
When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Colour/colour range:	Amber - Brown
Form:	Liquid
Odour:	Slight
Flash point:	None.
Specific gravity:	1.17 20˚C / 20˚C
pH:	4.4 - 4.9 80 g/l
Partition coefficient (log Pow):	< 0.000 (active ingredient)

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions of handling and storage.
Materials to avoid/Reactivity
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.
Data obtained on similar products and on components are summarized below.
Similar formulation
Acute oral toxicity
Rat, LD50 (limit test): > 5,000 mg/kg body weight
Practically non-toxic.
FIFRA category IV.
Acute dermal toxicity
Rat, LD50 (limit test): > 5,000 mg/kg body weight
Practically non-toxic.
FIFRA category IV.
No mortality.
Skin irritation
Rabbit, 6 animals, OECD 404 test:
Days to heal: 7
Primary Irritation Index (PII): 0.8/8.0
FIFRA category IV.
Slight irritation.
Eye irritation
Rabbit, 6 animals, OECD 405 test:
Days to heal: 10
Moderate irritation.
FIFRA category II.
Acute inhalation toxicity
Rat, male, LC50, 4 hours, aerosol: 1.6 mg/L
FIFRA category III.
Slightly toxic.
Skin sensitization
Guinea pig, Buehler test:
Positive incidence: 0 %
N-(phosphonomethyl)glycine: {**glyphosate**}
Mutagenicity
In vitro and in vivo mutagenicity test(s):
Not mutagenic.
Repeated dose toxicity
Rabbit, dermal, 21 days:
NOAEL toxicity: > 5,000 mg/kg body weight/day
Target organs/systems: none
Other effects: none

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Rat, oral, 3 months:
NOAEL toxicity: > 20,000 mg/kg diet
Target organs/systems: none
Other effects: none

Carcinogenicity
Mouse, oral, 24 months:
NOEL tumour: > 30,000 mg/kg diet
NOAEL toxicity: ~ 5,000 mg/kg diet
Tumours: none
Target organs/systems: liver
Other effects: decrease of body weight gain, histopathologic effects
Rat, oral, 24 months:
NOEL tumour: > 20,000 mg/kg diet
NOAEL toxicity: ~ 8,000 mg/kg diet
Tumours: none
Target organs/systems: eyes
Other effects: decrease of body weight gain, histopathologic effects

Toxicity to reproduction/fertility
Rat, oral, 3 generations:
NOAEL toxicity: > 30 mg/kg body weight
NOAEL reproduction: > 30 mg/kg body weight
Target organs/systems in parents: none
Other effects in parents: none
Target organs/systems in pups: none
Other effects in pups: none

Developmental toxicity/teratogenicity
Rat, oral, 6 - 19 days of gestation:
NOAEL toxicity: 1,000 mg/kg body weight
NOAEL development: 1,000 mg/kg body weight
Other effects in mother animal: decrease of body weight gain, decrease of survival
Developmental effects: weight loss, post-implantation loss, delayed ossification
Effects on offspring only observed with maternal toxicity.
Rabbit, oral, 6 - 27 days of gestation:
NOAEL toxicity: 175 mg/kg body weight
NOAEL development: 175 mg/kg body weight
Target organs/systems in mother animal: none
Other effects in mother animal: decrease of survival
Developmental effects: none

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.
Data obtained on product, similar products and on components are summarized below.

Aquatic toxicity, fish
Bluegill sunfish (Lepomis macrochirus):
Acute toxicity, 96 hours, static, LC50: 24 mg/L
Slightly toxic.
Rainbow trout (Oncorhynchus mykiss):
Acute toxicity, 96 hours, static, LC50: 42 mg/L
Slightly toxic.

Aquatic toxicity, invertebrates
Water flea (Daphnia magna):
Acute toxicity, 48 hours, static, EC50: 160 mg/L
Practically non-toxic.

Similar formulation

Aquatic toxicity, algae/aquatic plants
Green algae (Selenastrum capricornutum):
Acute toxicity, 72 hours, static, ErC50 (growth rate): 8.0 mg/L
Moderately toxic.
Green algae (Selenastrum capricornutum):
Acute toxicity, 96 hours, static, EC50: 2.6 mg/L
Moderately toxic.

Avian toxicity
Bobwhite quail (Colinus virginianus):
Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
Practically non-toxic.
Mallard duck (Anas platyrhynchos):
Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
Practically non-toxic.

Arthropod toxicity
Honey bee (Apis mellifera):
Oral/contact, 48 hours, LD50: > 100 µg/bee
Practically non-toxic.

Soil organism toxicity, invertebrates
Earthworm (Eisenia foetida):
Acute toxicity, 14 days, LC50: > 5,000 mg/kg dry soil
Practically non-toxic.

N-(phosphonomethyl)glycine; {glyphosate}

Bioaccumulation
Bluegill sunfish (Lepomis macrochirus):
Whole fish: BCF: < 1
No significant bioaccumulation is expected.

Dissipation
Soil, field:
Half life: 2 - 174 days
Koc: 884 - 60,000 L/kg
Adsorbs strongly to soil.
Water, aerobic:
Half life: < 7 days

13. DISPOSAL CONSIDERATIONS

Product
Keep out of drains, sewers, ditches and water ways.
Recycle if appropriate facilities/equipment available.
Burn in proper incinerator.
Follow all local/regional/national/international regulations.
Container
See the individual container label for disposal information.
Emptied containers retain vapour and product residue.
Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.
Empty packaging completely.
Triple or pressure rinse empty containers.
Do NOT contaminate water when disposing of rinse waters.
Ensure packaging cannot be reused.
Do NOT re-use containers.
Store for collection by approved waste disposal service.
Recycle if appropriate facilities/equipment available.
Follow all local/regional/national/international regulations.

14. TRANSPORT INFORMATION

The data provided in this section is for information only.
Please apply the appropriate regulations to properly classify your shipment for transportation.
Not hazardous under the applicable DOT, ICAO/IATA, IMO, TDG and Mexican regulations.

15. REGULATORY INFORMATION

TSCA Inventory
Exempt
OSHA Hazardous Components
Surfactant(s)
SARA Title III Rules
Section 311/312 Hazard Categories
Immediate
Section 302 Extremely Hazardous Substances
Not applicable.
Section 313 Toxic Chemical(s)
Not applicable.
CERCLA Reportable quantity
Not applicable.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.
Follow all local/regional/national/international regulations.
Please consult supplier if further information is needed.
In this document the British spelling was applied.
Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short -Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)
This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.
Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, MONSANTO Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for the purposes prior to use. In no event will MONSANTO Company be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR TO THE PRODUCT TO WHICH INFORMATION REFERS.
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STIHL WOODCUTTER BAR & CHAIN LUBRICANT

Packaged for Stihl Incorporated, 536 Viking Drive, Virginia Beach, VA 23452

Safety Data Sheet

Conforms to HCS 2012 (29 CFR 1910.1200)

Section 1. Identification

Product identifier

Product Name: **STIHL WOODCUTTER BAR & CHAIN LUBRICANT**

Other names: F-7410

Part/Product Number(s): **7010-871-0240**

Material Use: Bar and chain lubricant

Uses advised against: Not for internal engine use.

Manufacturer:
Omni Specialty Packaging, LLC
10399 Hwy 1 South
Shreveport, LA 71115
1-318-524-1100

Issuing date: May 8, 2014

Revision date: May 8, 2015

Revision number: 0

Company contact: OMNI EHS Department; E-Mail: sds@osp.cc; Contact phone: 318-524-1100
(Monday-Friday, 8:00 AM – 4:00 PM, CST)

In case of emergency :
CHEMTREC: Within USA and Canada: 1 (800) 524-9300 (24/7)
CHEMTREC Outside USA and Canada: +1 703-527-3887 (24/7

Section 2. Hazards Identification

OSHA/HCS Status: This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or Mixture: Not classified

GHS Label Elements

Hazard pictograms: None

Signal word: None

Appearance: Straw colored **Physical State:** Liquid **Odor:** Petroleum distillates

Hazard statement: None

Precautionary statements

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention: Not applicable

Response: Not applicable

Storage: Not applicable

Disposal: Not applicable

Hazards not otherwise classified (HNOC): Defatting to the skin.

Section 3. Composition/Information on Ingredients

Petroleum mineral oil lubricant base stock with proprietary performance additives mixture.

Substance/mixture: Mixture

Components Name	CAS number	Weight %*
Lubricant Base Oil (Petroleum) Highly refined mineral oils (C15-C50)	Various	95 – 99
Bar & Chain Oil Additive Mixture	Proprietary	1-5

This product does not contain known hazardous materials at the ≥ 1% level or known carcinogens at the ≥ 0.1% level as defined by 29 CFR 1910.1200.

* The exact percentage of composition has been withheld as a trade secret.

Section 4. First Aid Measures

Description of necessary first aid measures

General Advice: No specific first aid measures are required. Get medical attention if irritation develops and persists.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if irritation develops and persists.

Skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation or allergic reaction develops and persists.

Inhalation: In case of inhalation of decomposition products in a fire, symptoms may be delayed. If inhaled, remove to fresh air. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.

Ingestion: Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Most Important Symptoms and Effects: Personnel with pre-existing skin disorders should avoid contact with this product. Under normal use conditions, no adverse effects to health are known.

Eye contact: Not expected to cause prolonged or significant eye irritation.

Skin contact: Contact with skin is not expected to cause prolonged or significant irritation. Contact with skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Inhalation: Not expected to be harmful if inhaled. Contains petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficult breathing.

Ingestion: Not expected to be harmful if swallowed.

Note to physician: Treat symptomatically.

Section 5. Fire-Fighting Measures

Uniform Fire Code: Class IIIB

Flash Point: >93.3°C (>200°F)

Extinguishing Media

Suitable Media: In case of fire, use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water fog, alcohol resistant foam, dry chemical, carbon dioxide (CO2) extinguisher or spray.

Unsuitable Media: CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical: Keep product and empty container away from heat and sources of ignition as product will burn. Contact with strong oxidizers may cause fire. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be contained, prevented from being discharged to any waterway, sewer or drain and disposed of in accordance with local regulations.

Hazardous Combustion Products: Combustion products may include the following: Carbon dioxide (CO2) Carbon monoxide (CO), and Nitrogen oxides.

Protection of Fire Fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). See Section 12 for ecological information.

Methods and materials for containment and cleaning up

Small Spills: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large Spills: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non- combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

NOTE: If RQ (Reportable Quantity) is exceeded or if spills enter a body of water, report immediately to the USEPA's National Response Center at (800) 424-8802. Check with your local and state regulators regarding their reporting requirements.

Section 7. Handling and Storage

Precautions for safe handling

Protective measures: Eye protection and face shield should be used if material is used under conditions that

increase the chances of splattering. Put on appropriate personal protective equipment (see Section 8). Keep out of reach of children.

Advice on general occupational hygiene: Do not get in eyes, on skin or on clothing. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas.
See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, Including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, strong oxidizing agents (see Section 10) and food and drink. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination. Avoid contaminating soil or releases into sewage or drainage systems and bodies of water.

Bulk material handling: Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient.

Section 8. Exposure Controls/Personal Protection

Control parameters

Occupational Exposure Limits

Chemical name	ACGIH		OSHA		NIOSH	
	TLV	STEL	PEL	STEL	TWA	Ceiling
Lubricant Base Oil (Petroleum) Highly refined mineral oils (C15-C50)	5 mg/m3 (mist)	10 mg/m3 (mist)	5 mg/m3 (mist)	–	–	–

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Emergency shower and eyewash station.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Eye/Face Protection: Wear safety glasses with side shields. A face shield may be necessary under some conditions.

Skin and Body Protection

Hand protection: Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. Consult your supervisor or Standard Operating Procedure (SOP) for special handling instructions.

Body protection: No protective equipment is needed under normal use conditions. For non-routine tasks, personal protection equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

Respiratory protection: No respiratory protection is normally required. If user operation generates an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from measured concentrations of this material. The correct choice of

respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Section 9. Physical and Chemical Properties

Appearance	(Typical or Target)
Physical State:	Liquid
Color:	Straw colored
Odor:	Petroleum like
Odor threshold:	Not available
pH:	Not applicable
Boiling Point:	Not available
Flash Point (Closed cup):	>93.3°C (>200°F) (Typical or Target)
Evaporation rate (Butyl acetate = 1):	Not available
Flammability (solid, gas):	Not applicable. Based on - Physical state
Flammable) Limit in Air	Not available
Vapor pressure:	Not available
Vapor density (Air = 1):	>1
Relative density:	0.92 - 0.93 g/l at 15°C (Typical or Target)
Solubility:	In soluble in water
Partition coefficient (n-Octanol/water):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity – Kinematic (cSt (mm2/s)@ 40°C):	65 – 173
Viscosity – Dynamic (cSt (mm2/s) @ 100°C):	8 – 12.4
VOC %:	0 %

Section 10. Stability and Reactivity

Reactivity:	Not reactive under normal storage conditions
Chemical stability:	Stable under normal storage conditions
Possibility of hazardous reactions:	None under normal processing.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, flames and sparks.
Incompatible materials:	Oxidizing agents and open flames.
Hazardous decomposition products:	May include: Fumes, Oil vapors, Smoke, Carbon Oxides (including carbon monoxide and carbon dioxide), Aldehydes, Nitrogen oxides, and incomplete combustion products.

Section 11. Toxicological Information

Information on toxicological effects

Basis for Assessment: Information given is based on product data, a knowledge of the components and the toxicity of similar products.

Likely Routs of Exposure: Exposure may occur via skin absorption, skin or eye contact, inhalation, ingestion.

Substance/Mixture

Acute Toxicity	Oral LD50	Dermal LD50	Inhalation LC50
Lubricant Base Oil (Petroleum) Highly refined mineral oils (C15-C50) Mixture - Typical	>2000 mg/Kg (rat)	>2000 mg/Kg (rabbit)	>2.18 mg/L (rat) 4h (mist)

Aspiration hazard:	Not expected to be an aspiration hazard.
Skin Corrosion/Irritation:	No known significant effects or critical hazards.
Serious Eye Damage/Irritation:	No known significant effects or critical hazards.
Skin Sensitization:	No known significant effects or critical hazards.
Respiratory Sensitization:	No known significant effects or critical hazards.

Specific Target Organ Toxicity (Single Exposure) - STOT-SE:	No known significant effects or critical hazards.
Specific Target Organ Toxicity (Repeated Exposure) – STOT-RE:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Germ Cell Mutagenicity:	No known significant effects or critical hazards.
Reproductive Toxicity	No known significant effects or critical hazards.

Information on Toxicity Effects of Compounds

Lubricant Base Mineral Oil (Petroleum)

Mineral oils are known to cause cancer because of carcinogenic components (e.g. Benzene). The lubricant base mineral oils in this product have been highly refined by a variety of processes including severe solvent extraction, severe hydro cracking or severe hydro treating to reduce aromatics and improve performance characteristics. The oils in the is product meets the IP-346 criteria of less than 3 percent PHA's and are not considered to be a carcinogen by the International Agency for Research on Cancer.

None of the oils in this product requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IRAC) as: carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

Section 12. Ecological Information

The information is based on data available for the material, the components of the material, and similar materials.

Ecotoxicity: No testing has been performed by the manufacturer. Ecotoxicity hazard is based on an evaluation of data for the components or a similar material. Not expected to be harmful to aquatic organisms.

Mobility:	Base oil component – Low solubility and floats and is expected to migrate from water to land. Expected to partition to sediment and wastewater solids.
Soil/water partition coefficient (K_{OC}):	Not available.
Persistence and degradation Biodegradation:	The material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.
Bioaccumulative potential Bioaccumulation:	This product is not expected to bioaccumulate through food chain in the environment.
Other adverse effects:	No known significant effects or critical hazards.
Other ecological information:	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

Section 13. Disposal Considerations

Disposal recommendations based on material supplied.

Waste treatment methods:	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Consult the appropriate state, regional, or local regulations for additional requirements. The generation of waste should be avoided or minimized wherever possible.
Product waste:	Significant quantities of waste product residues should not be disposed of via the sanitary sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Incineration or landfill should only be considered when recycling is not

feasible. Oil collection services are available for used oil recycling.

Contaminated packaging: Empty containers or liners may retain some product residues and could pose a potential fire and explosion hazard. Do not cut, puncture, or weld containers.

Other information: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport Information

General information: Petroleum Lubricating oil - Not regulated.

	DOT Classification	IMDG	IATA
Bar & Chain Oil	Not Regulated	Not Regulated	Not Regulated

Special precautions for user: Transport within user's premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

United States Regulations

United States Inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304: No products were found.

SARA 311/312:

Immediate (Acute) Health Effects:	No
Delayed (Chronic) Health Effects:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No

SARA 313:

The following components of this material are found on the EPCRA 313 list:

None

Supplier notification: This product does not contain any hazardous ingredients at or above regulated thresholds.

CWA (Clean Water Act): This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA: This material, as supplied, does not contain any substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

State Regulations

Massachusetts: None of the components are at or above regulated thresholds.
New Jersey: None of the components are at or above regulated thresholds.
Pennsylvania: None of the components are at or above regulated thresholds.
California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause cancer.
None

Canada

WHMIS Hazard Class: Not classified. This Product Is Not Controlled Under WHMIS (Canada)

International Chemical Inventories:

All components comply with the following chemical inventory requirements: DSL (Canada)

Section 16. Other Information

NFPA Rating:	**Health Hazard – 1**	**Flammability – 1**	**Instability/Reactivity – 0**
HMIS Rating:	**Health Hazard – 1**	**Flammability – 1**	**Physical Hazards – 0**

(NFPA & HMIS Hazard Rating Key: 0 - Minimum Hazard; 1 - Slight Hazard; 2 - Moderate Hazard; 3 - High Hazard; 4 - Extreme Hazard; * - Chronic Hazard Indicator, & PPE - Personal Protective Equipment Index A to L. These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS or Hazardous Material Identification System).

Key to abbreviations:

OSHA = Occupational Safety and Health Administration
ACGIH= American Conference of Industrial Hygienists
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service Registry Number
cSt = Centistroke (mm2/s)
GHS = Global Harmonized System of Classification and Labeling Of Chemicals.
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
OEL = Occupational Exposure Limit
SDS = Safety Data Sheet
STEL = Short term exposure Limit
UN = United Nations
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transportation of Dangerous Goods

Prepared By: **OMNI Specialty Packaging EH&S Department**

Revision Date: **May 8, 2015**

Status: **Final**

Revision Note: **All Sections. First version in OSHA GHS SDS format.**

Consumer Product Improvement Act of 2008, General Conformity Certification

For Consumer Product Packages: This product has been evaluated and is certified to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission. Where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No testing is required to certify compliance with the provisions. The date of the manufacturing is stamped on the product container.

Disclaimer

All reasonably practicable steps have been taken to ensure the information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This information is furnished upon condition that the person receiving it shall make their own determination of the suitability of the material for their particular purpose.

End of Safety Data Sheet

NOVA Chemicals®

Material Safety Data Sheet

Material Name: NOVAPOL® Polyethylene - Not Coloured(All Grades) **MSDS ID: NOVA-0029**

Section 1 - Product and Company Identification

Synonyms: HDPE, LDPE, LLDPE, LMDPE, MDPE Polyethylene resins, ethylene polymers
Chemical Name: Polyethylene
Chemical Family: Polymer
Material Use: Thermoplastic resin extruded into film, sheet or pipe, or moulded into bottles, containers, lids, and other items.
Chemical Formula: $(CH_2)(CH_2)_x$

NOVA Chemicals
P.O. Box 2518, Station M
Calgary, Alberta, Canada T2P 5C6

MSDS Information: 1-412-490-4063
MSDS Email: msdsemail@novachem.com

EMERGENCY Telephone Numbers:
North America (Canada and US):
1-800-561-6682, 1-403-314-8767 (NOVA Chemicals) (24 hours)
1-800-424-9300 (CHEMTREC-USA) (24 hours)
1-613-996-6666 (Canutec-Canada) (24 hours)
Mexico and South America: +44 (0) 1235 239 670 (NCEC) (24 hours)

Section 2 - Hazards Identification

HMIS Ratings: Health: 0* **Fire:** 1 **Physical Hazard:** 0 **Personal Protection:** safety glasses, gloves, respirator
*Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard*
NFPA Ratings: Health: 0 **Fire:** 1 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Emergency Overview

CAUTION! Product is a clear to white, non-toxic solid pellet or granular powder having minimal odour. Dusts and heat-released air emissions may be irritating to the eyes, skin, and respiratory system. Accumulated fine dusts may form explosive air-dust mixtures. Spilled product may create a dangerous slipping hazard. Keep released pellets away from storm sewers and from entry into other aquatic systems. Under fire conditions, product will readily burn and emit irritating smoke. Contact with molten material may cause serious thermal burns.

Potential Health Effects: Eye

Contact with powder or fines may cause mechanical irritation. Contact with hot or molten material may cause severe injury, including possible blindness.

Potential Health Effects: Skin

Contact with powder or fines may cause mechanical irritation which is increased by rubbing or if skin is dry. Contact with hot or molten material may cause severe thermal burns. The crystalline silica/talc is inextricably bound or coated in the polyethylene; this appears to prevent any toxic reaction to the skin.

Potential Health Effects: Ingestion

Ingestion may produce mild gastrointestinal irritation and disturbances.

Potential Health Effects: Inhalation

Inhalation of fine particles may cause respiratory irritation. Thermal processing fumes may cause irritation, pulmonary oedema and a possible asthma-like response. The crystalline silica/talc is inextricably bound or coated in the polyethylene; this appears to prevent any toxic reaction to the lungs.

Section 3 - Composition/Information on Ingredients

CAS #	Component	Percent by Wt.
9002-88-4	Polyethylene (Ethene homopolymer) *	>98
68855-54-9 and/or 14807-96-6	Flux-calcined diatomaceous earth and/or Talc (Hydrated Magnesium Silicate) **	0-1
Not Available	Additives ***	0-1

Additional Information

* This product may also be described as 1-Butene, polymer with ethene (CAS # 25087-34-7) or as 1-Hexene, polymer with ethene (CAS # 25213-02-9). Ethene and ethylene are interchangeable.
** This is 'antiblock'. It is added to some NOVAPOL resin grades (e.g. film resins). Flux-calcined diatomaceous earth may contain up to 75% crystalline silica.
*** Other chemical additives including antioxidants, UV stabilizers, processing aids and slip agents may be formulated into various polyethylene resin grades in a total concentration of less than 1% wt/wt.

This product is NOT hazardous under 29 CFR 1910.1200 (Hazard Communication).
This material is NOT a controlled product under Canadian WHMIS regulations.
This material is NOT REGULATED as a hazardous material / dangerous goods for transportation.

See Section 8 for applicable exposure limits. See Section 11 for applicable toxicity data.

Section 4 - First Aid Measures

First Aid: Eyes

Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

First Aid: Skin

Remove dusty or contaminated clothing and shoes. Wash affected area with soap and water. Seek medical attention if symptoms develop or persist. In case of contact with molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product, or molten product that has cooled, from skin without medical assistance.

First Aid: Inhalation

Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist. Inhalation of smoke following a fire may result in delayed pulmonary oedema; seek immediate medical attention.

First Aid: Ingestion

Material is not expected to be absorbed from the gastrointestinal tract. DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

First Aid: Notes to Physician

After adequate first aid, no further treatment is necessary, unless symptoms reappear. For more detailed medical emergency support information call 1-800-561-6682 or 1-403-314-8767 (24 hours, NOVA Chemicals Emergency Response). Burns should be treated as thermal burns. Molten resin will come off as healing occurs; therefore, immediate removal from the skin is not necessary. Treatment should be directed at the control of symptoms and the clinical condition of the patient. Ingested material should pass through the digestive system without injury. The crystalline silica (if present)/talc is inextricably bound or coated in the polyethylene; this appears to prevent any toxic reaction to the skin or lungs (if inhaled).

Section 5 - Fire Fighting Measures

See Section 9: Physical Properties for flammability limits, flash point and auto-ignition information.

General Fire Hazards

Solid resins support combustion but do not meet combustible definition. Product will burn at high temperatures but is not considered flammable. Under fire conditions, product will readily burn and emit irritating smoke. A high concentration of airborne powders or dust may form an explosive mixture with air.

Explosion Hazards

Accumulated fine dusts may form an explosive mixture with air. Risk of dust-air explosion is increased if flammable vapours are also present. May accumulate hazardous static charge.

Hazardous Combustion Products

Upon heating, polyethylene may emit various oligomers, waxes and oxygenated hydrocarbons as well as carbon dioxide, carbon monoxide and small amounts of other organic vapours (e.g. aldehydes, acrolein). Inhalation of these decomposition products may be hazardous.

Extinguishing Media

Water fog or water spray. In the case of small fires, dry chemical or carbon dioxide or foam can be used. Avoid high pressure, direct water stream that may spread molten or burning resins.

Fire Fighting Equipment/Instructions

Position upwind. Keep unnecessary personnel away. Move containers from fire area if you can do so without risk. Fight fire from maximum distance or use unmanned holders or monitor nozzles. Fire fighters should wear full-face, self-contained breathing apparatus and thermal protective clothing. Avoid inhaling any smoke and combustion materials. Remove and clean or destroy any contaminated clothing. Cool containers with flooding quantities of water until well after the fire is out. Control runoff waters to prevent entry into sewers, drains, ditches, underground or confines spaces and waterways.

Section 6 - Accidental Release Measures

Evacuation Procedures

Isolate area. Keep unnecessary personnel away. Alert stand-by emergency and fire fighting personnel.

Spills

Stop leak, isolate and contain spill. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways. Spilled product may create a dangerous slipping hazard. Use appropriate tools to put the spilled solid in an appropriate disposal or recovery container. Reuse or recycle where possible.

Special Procedures

Contact local police/emergency services and appropriate emergency telephone numbers provided in Section 1. Ensure that statutory and regulatory reporting requirements in the applicable jurisdiction are met. Wear appropriate protective equipment and clothing during cleanup. Individuals without appropriate protective equipment should be excluded from area of spill until cleanup has been completed.

See Section 8 for recommended Personal Protective Equipment and see Section 13 for waste disposal considerations.

Section 7 - Handling and Storage

Handling Procedures

Handle in contained and properly designed equipment systems. Use with adequate ventilation. Avoid ingestion and inhalation. Keep away from uncontrolled heat and incompatible materials. Ground all material handling and transfer equipment to dissipate buildup of static electricity. Keep handling areas free of loose pellets, powders and dust buildup. Every effort should be made to prevent the accumulation of powders or fine dusts around material handling systems. Accumulated powders or fine dusts may form explosive air-dust mixtures. For additional information on control of static and minimizing potential dust and fire hazards, refer to NFPA-654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2006 Edition". Spilled product may create a dangerous slipping hazard.

Storage Procedures

Storage area should be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorized personnel. Store in closed, grounded and properly designed vessels, away from uncontrolled heat and incompatible materials. Outdoor storage of product in bags requires protection from ultra-violet sunlight by use of a UV stabilized bag or alternate means. Avoid accumulation of dust by frequent cleaning and suitable construction of storage and handling areas. Keep shovels and vacuum systems readily available for cleanup of loose material. **DO NOT** enter filled bulk containers and attempt to walk over product, due to risk of slipping and possible suffocation. Use a fall arrest system when working near open bulk containers.

See Section 8 for appropriate Personal Protective Equipment, and see Section 10 for information on Incompatibilities.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Refer to published exposure limits - use effective control measures and PPE to maintain worker exposure to concentrations that are below these limits. Ensure that eyewash stations and safety showers are in close proximity to work locations.

Note: In this product, any crystalline silica/talc content is inextricably bound or coated in the polyethylene. This appears to prevent any toxic reaction to the lungs.

B: Component Exposure Limits

ACGIH, OSHA, NIOSH, EPA, Alberta, and Ontario exposure limit lists have been checked for major components listed with CAS registry numbers. Other exposure limits may apply, check with proper authorities.

*Note: The Vacated OSHA Permissible Exposure Limits (PELs) are those provided in the 1989 update to OSHA's Air Contaminants Standard 29 CFR 1910.1000. These limits were vacated by the U.S. Court of Appeals, Eleventh Circuit but may be enforceable in some states.

Polyethylene (Ethene homopolymer) (9002-88-4)

ACGIH:	10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended) (related to Particulates (insoluble or poorly soluble) not otherwise specified (PNOS))
OSHA (Vacated)*:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) (related to Nuisance particulates)
OSHA (Final):	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) (related to Nuisance particulates)
Alberta:	10 mg/m3 TWA (total); 3 mg/m3 TWA (respirable) (related to Particulate Not Otherwise Regulated)
Ontario:	10 mg/m3 TWA (inhalable fraction); 3 mg/m3 TWA (respirable fraction) (related to Particles (Insoluble or Poorly Soluble) Not Otherwise Specified (PNOS))

Flux-calcined diatomaceous earth (68855-54-9)

ACGIH:	0.025 mg/m3 TWA (respirable fraction) (related to Silica, crystalline - α-quartz)
OSHA (Vacated)*:	0.1 mg/m3 TWA (respirable dust) (related to Quartz)
NIOSH:	0.05 mg/m3 TWA (respirable dust) (related to Silica, crystalline) 50 mg/m3 IDLH (related to quartz)
Alberta:	0.025 mg/m3 TWA (respirable particulate) (related to Silica - Crystalline, Quartz))
Ontario:	0.10 mg/m3 TWA (respirable fraction) (designated substances regulation) (related to Silica, Crystalline - Quartz)

Talc (Hydrated Magnesium Silicate) (14807-96-6)

ACGIH:	2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)
OSHA (Vacated)*:	2 mg/m3 TWA (less than 1% crystalline silica, containing no asbestos, respirable dust)
NIOSH:	2 mg/m3 TWA (containing no asbestos and less than 1% quartz, respirable) 1000 mg/m3 IDLH
Alberta:	2 mg/m3 TWA (respirable particulate containing no asbestos fibres)
Ontario:	2 mg/m3 TWA (containing no asbestos, respirable fraction, particulate matter containing no asbestos and < 1% crystalline silica)

ENGINEERING CONTROLS

Engineering methods to reduce hazardous exposure are preferred controls. Methods include mechanical ventilation (dilution and local exhaust) process or personal enclosure, remote and automated operation, control of process conditions, leak detection and repair systems, and other process modifications. Ensure all exhaust ventilation systems are discharged to outdoors, away from air intakes and ignition sources. Supply sufficient replacement air to make up for air removed by exhaust systems. Administrative (procedure) controls and use of personal protective equipment may also be required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses during normal handling. Wear full-face shield during thermal processing if contact with molten material is likely.

Personal Protective Equipment: Skin/Hands/Feet

Wear thermal insulating gloves and other protective clothing (such as long sleeved shirts and long pants) whenever molten material is present. Safety footwear with good traction is recommended to help prevent slipping. Static Dissipative (SD) rated footwear is recommended.

Personal Protective Equipment: Respiratory

If engineering controls and ventilation are not sufficient to prevent buildup of aerosols, vapours or dusts, appropriate NIOSH approved air-purifying respirators or self-contained breathing apparatus (SCBA) appropriate for exposure potential should be used. Air-supplied breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

Personal Protective Equipment: General

Personal protective equipment (PPE) should not be considered a long-term solution to exposure control. Employer programs to properly select, fit, maintain, and train employees to use equipment must accompany PPE. Consult a competent industrial hygiene resource, the PPE manufacturer's recommendation, and/or applicable regulations to determine hazard potential and ensure adequate protection.

Section 9 - Physical & Chemical Properties

Physical State and Appearance:	Solid, pellets, or granular powder	**Colour:**	Clear to white
Odour:	Minimal, sweet	**pH:**	Not applicable
Vapour Pressure:	Not applicable	**Vapour Density at 0°C (Air=1):**	Not applicable
Boiling Point:	Not applicable	**Melting Point:**	Range: 105°C to 135°C (221°F to 275°F)
Solubility (H2O):	Insoluble	**Specific Gravity (Water=1):**	Range: 0.905 to 0.965
Evaporation Rate (n-Butyl Acetate=1):	Not applicable	**Octanol/H2O Coeff.:**	Not applicable
Decomposition Temperature:	Varies; >300°C (>572°F)	**Softening Point:**	Range: 85°C to 127°C (185°F to 261°F)
Auto Ignition:	Range: 330°C to 410°C (630°F to 770°F)	**Flash Point:**	Not applicable
Flash Point Method:	Not applicable	**Upper Flammable Limit (UFL):**	Not applicable
Lower Flammable Limit (LFL):	Not applicable	**Flammability Classification:**	Not flammable

Section 10 - Stability & Reactivity Information

Chemical Stability

This product is stable under normal use conditions for shock, vibration, pressure, or temperature.

Chemical Stability: Conditions to Avoid

Avoid strong oxidizing agents. Avoid processing material over 300°C (572°F).

Incompatibility

May react with strong oxidizing agents. Organic solvents, ether, gasoline, lubricating oils, chlorinated hydrocarbons and aromatic hydrocarbons may react with and degrade polyethylene. Powders or dusts may form an explosive mixture with air. Risk of dust-air explosion is increased if flammable vapours are also present.

Possibility of Hazardous Reactions or Hazardous Polymerization

Hazardous polymerization not likely to occur.

Corrosivity

Not corrosive to the common metals.

Hazardous Decomposition

Upon heating, polyethylene may emit various oligomers, waxes and oxygenated hydrocarbons as well as carbon dioxide, carbon monoxide and small amounts of other organic vapours (e.g. aldehydes, acrolein). Inhalation of these decomposition products may be hazardous.

Section 11 - Toxicological Information

A: Acute Toxicity - General Product Information

Material is considered essentially inert and non-toxic. Exposures to high levels of dust or heated fumes may cause irritation and possible pulmonary oedema. Contact with molten material may cause severe thermal burns. The product is expected to present a lesser degree of hazard since the hazardous components are incorporated in a polymer matrix. The following additional information has been found for its components:

Flux-calcined diatomaceous earth/crystalline silica / Talc (Hydrated Magnesium Silicate) - Inhalation may cause discomfort or irritation to the respiratory tract and nasal passages. May be irritating to eyes and skin.

B: Acute Toxicity - LD50/LC50

Polyethylene (Ethene homopolymer) (9002-88-4)
Inhalation LC50 Mouse: 12 g/m3/30M
Polyethylene (1-Butene, polymer with ethene) (25087-34-7)
Oral LD50 Rat: 4 g/kg
Flux-calcined diatomaceous earth (68855-54-9)
Oral LD50 Rat: 500 mg/kg (related to Quartz)

C: Chronic Toxicity - General Product Information

Product has minimal chronic toxicity. Most polyethylene dust particles are large and non-respirable. There are no known or reported reproductive or genetic effects. The product is expected to present a lesser degree of hazard since the hazardous components are incorporated in a polymer matrix. The following additional information has been found for its components:

Flux-calcined diatomaceous earth/crystalline silica - target organ is the lung and respiratory system. IARC has classified crystalline silica as a Group 1 (carcinogenic to humans). However, the crystalline silica is considered bound into the polyethylene; this appears to prevent any toxic reaction to the skin or lungs.

Talc (Hydrated Magnesium Silicate) - Inhalation of dust causes respiratory irritation and difficulty breathing. Long-term inhalation may cause chronic lung disease or talc pneumoconiosis.

D: Chronic Toxicity - Carcinogenic Effects

ACGIH, EPA, IARC, OSHA, and NTP carcinogen lists have been checked for selected similar materials or those components with CAS registry numbers.

Polyethylene (Ethene homopolymer) (9002-88-4)

IARC: Supplement 7 [1987], Monograph 19 [1979] (Group 3 (not classifiable))

Flux-calcined diatomaceous earth (68855-54-9)

ACGIH: A2 - Suspected Human Carcinogen (related to Quartz)
NTP: Known Human Carcinogen (related to Quartz) (Select Carcinogen)
IARC: Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources) (related to Quartz) (Group 1 (carcinogenic to humans))

Talc (Hydrated Magnesium Silicate) (14807-96-6)

ACGIH: A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers)
IARC: Monograph 93 [in prep], Supplement 7 [1987], Monograph 42 [1987] (Group 3 (not classifiable))

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

Polyethylene is an essentially biologically inert solid and considered non-toxic to the aquatic environment. It is stable (does not decompose) in landfills or in aquatic systems.

B: Component Analysis - Ecotoxicity - Aquatic/Terrestrial Toxicity

Talc (Hydrated Magnesium Silicate) (14807-96-6)

96 Hr LC50 Brachydanio rerio: >100 g/L [semi-static]

Environmental Fate/Mobility

If released into watercourses, most polyethylene pellets float. Pellets are persistent in aquatic and terrestrial systems. Product should be recovered from water and land following spills. This product has not been found to migrate through soils.

Persistence/Degradability

Product does not readily degrade. Under optimal oxidation conditions, >99% of polyethylene will remain intact after exposure to microbial actions. Product will slowly change (embrittle) in the presence of sunlight, but will not fully breakdown. Product buried in landfill has been found to be stable over time. No toxic degradation products are known to be produced.

Bioaccumulation/Accumulation

Pellets may accumulate in the digestive systems of birds and aquatic life, causing injury and possible death due to starvation.

Section 13 - Disposal Considerations

U.S./Canadian Waste Information

A: General Product Information

This product is not known to generate hazardous wastes according to US and Canadian regulations. The use, mixing or processing of this product may alter its properties or hazards. Check federal, provincial/state and local environmental regulations prior to disposal. Preferred disposal methods for polymers in order of preference are: 1) clean and reuse if possible, 2) recover and resell through plastic recyclers or resin brokers, 3) incinerate with waste heat recovery and 4) landfill. Reuse, recycling, storing, transportation and disposal must be in accordance with applicable federal, provincial/state and local regulations. DO NOT ATTEMPT TO DISPOSE OF BY UNCONTROLLED INCINERATION. Open burning of plastics at landfills should not be undertaken.

See Section 7: Handling and Storage and Section 8: Exposure Controls/Personal Protection for additional handling information that may be applicable for safe handling and the protection of employees.

Waste generator is advised to carefully consider hazardous properties and control measures needed for other materials that may be found in the waste.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Section 14 - Transportation Information

US DOT Information

Shipping Name: NOT REGULATED as a Hazardous Material for Transportation.

Canadian TDG Information

Shipping Name: NOT REGULATED as Dangerous Goods for Transportation.

International Air Transport Association (IATA) and International Civil Aviation Organization (ICAO) Information

Shipping Name: NOT REGULATED as Dangerous Goods for Transportation.

International Maritime Dangerous Goods (IMDG) Code

Shipping Name: NOT REGULATED as Dangerous Goods for Transportation.

Section 15 - Regulatory Information

A: International Regulations

Component Analysis - International Inventory Status

Component	CAS #	US - TSCA	CANADA - DSL	EU - EINECS
Polyethylene (Ethene homopolymer)	9002-88-4	Yes	Yes	Exempt
Flux-calcined diatomaceous earth	68855-54-9	Yes	Yes	Yes
Talc (Hydrated Magnesium Silicate)	14807-96-6	Yes	Yes	Yes
Polyethylene (1-Butene, polymer with ethene)	25087-34-7	Yes	Yes	Exempt
Polyethylene (1-Hexene, polymer with ethene)	25213-02-9	Yes	Yes	Exempt

B: USA Federal & State Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by Federal or State regulations. Check for applicable regulations.

The EPA Storm Water Regulations classify resin pellets as "significant materials". Prevent pellets from entering drains, ditches or waterways. Site emission reporting may be required. Check applicable regulations.

USA OSHA Hazard Communication Class

According to 29 CFR 1910.1200 (Hazard Communication), polyethylene polymer product is not hazardous.

USA Right-to-Know - Federal

None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

USA Right-to-Know - State

The following components appear on one or more of the following state hazardous substances lists. Some components (including those present only in trace quantities, and therefore not listed in this document) may be included on the Right-To-Know lists of other U.S. states. The reader is therefore cautioned to contact his or her NOVA Chemicals' representative or NOVA Chemicals' Product Integrity group for further U.S. State Right-To-Know information.

Component	CAS #	NJ	PA
Flux-calcined diatomaceous earth (¹related to Silica, Quartz) (²related to Quartz)	68855-54-9	Yes¹	Yes²
Talc (Hydrated Magnesium Silicate)	14807-96-6	Yes	Yes

C: Canadian Regulations - Federal and Provincial

Canadian Environmental Protection Act (CEPA): All components of this product are on the Domestic Substances List (DSL) and are acceptable for use under the provisions of CEPA.

WHMIS Ingredient Disclosure List (IDL)

The following components are identified under the Canadian Hazardous Products Act - Ingredient Disclosure List (IDL):

Component	CAS #	Minimum Concentration
Flux-calcined diatomaceous earth	68855-54-9	1 % (related to Silica, amorphous, diatomaceous earth)

WHMIS Classification

Workplace Hazardous Materials Information System (WHMIS): This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS contains all the information required by the CPR.

NOT CONTROLLED under WHMIS.

Other Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by Federal or Provincial regulations. Check for applicable regulations.

Section 16 - Other Information

Label Information

CAUTION! Product is a clear to white, non-toxic solid pellet or granular powder having minimal odour. Dusts and heat-released air emissions may be irritating to the eyes, skin, and respiratory system. Accumulated fine dusts may form explosive air-dust mixtures. Spilled product may create a dangerous slipping hazard. Keep released pellets away from storm sewers and from entry into other aquatic systems. Under fire conditions, product will readily burn and emit irritating smoke. Contact with molten material may cause serious thermal burns.

FIRST AID:

SKIN: Remove dusty or contaminated clothing and shoes. Wash affected area with soap and water. Seek medical attention if symptoms develop or persist. In case of contact with molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product, or molten product that has cooled, from skin without medical assistance.

EYES: Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

INHALATION: Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist. Inhalation of smoke following a fire may result in delayed pulmonary oedema; seek immediate medical attention.

INGESTION: Material is not expected to be absorbed from the gastrointestinal tract. DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

IN CASE OF A SPILL: Stop leak, isolate and contain spill. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways. Spilled product may create a slipping hazard. Use appropriate tools to put the spilled solid in an appropriate disposal or recovery container. Reuse or recycle where possible.

References

Available on request.

Special Considerations

Exposure to the Hazardous Combustion and Decomposition Products as described in the MSDS, Sections 5 and 10 may be linked with various acute and chronic health effects. These effects include irritation of eyes and upper respiratory tract primarily from the aldehydes; breathing difficulties, systemic toxicity such as liver, kidney, and central nervous system effects.

NOVA Chemicals has monitored worker exposures to emissions during commercial-scale processing of polyethylene. Concentrations of hazardous decomposition products were determined to be well below established exposure limits in the workplace. "Quantitation of Employee Exposure to Emission Products Generated By Commercial-Scale Processing of Polyethylene" is available in the Am. Ind. Hyg. Assoc. J. 56:809-814 (1995) and “Quantification of Emission Compounds Generated During Commercial-Scale Processing of Advanced SCLAIRTECH™ Polyethylene” is available in the Journal of Plastic Film & Sheeting Volume 26 Issue 2, April 2010.

For information on ventilation considerations for the control of volatile air contaminants from polyethylene, please request a copy of NOVA Chemicals’ publication, “Ventilation Guidelines for Heat-Processing Polyethylene Resins”.

For additional information on unloading hopper cars containing plastic resins, refer to NOVA Chemicals' publication, “Hopper Car Unloading Guide”.

For information on processing properties, selection of NOVAPOL resin grades, refer to the NOVAPOL Product Data Sheets available on our web site, under PRODUCTS & SERVICES: http://www.novachemicals.com.

For additional information on preventing pellet loss, refer to published plastic industry publications and resources under 'Operation Clean Sweep'; now downloadable from the web at http://www.opcleansweep.org/.

Polyethylene fines and dust particles are listed as a Class I combustible dust by the National Fire Protection Association (see NFPA-68, Table F.1 (e)). For additional information on control of static and minimizing potential dust and fire hazards, refer to NFPA-654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids, 2006 Edition".

For NOVAPOL resin grade specific information including food contact compliance statements, please contact your sales representative or refer to NOVA Chemicals' polyethylene Product Data Sheets.

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = Transport of Dangerous Goods by Road; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; BOD = Biochemical Oxygen Demand; CAS = Chemical Abstracts Service; CEPA = Canadian Environmental Protection Act; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EC50 = Effective Concentration 50%; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; FDA = Food and Drug Administration; GHS = Globally Harmonized System for the Classification and Labelling of Chemicals; HCS = Hazard Communication Standard; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life or Health; IMDG = International Maritime Dangerous Goods; IMO = International Maritime Organization; ISHL = Industrial Safety and Health Law; Kow = Octanol/water partition coefficient; LC50 = Lethal Concentration 50%; LD50 = Lethal Dose 50%; LEL = Lower Explosive Limit; LFL = Lower Flammable Limit; LLV = Level Limit Ceiling Limit (Sweden dust); MAK = Maximum Concentration Value in the Workplace; MITI = Ministry of International Trade and Industry; MSDS = Material Safety Data Sheet; NAB = Threshold Values (Indonesia); NCEC = National Chemical Emergency Centre; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OEL = Occupational Exposure Limit; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit; PNOC = Particulates Not Otherwise Classified; PPE = Personal Protective Equipment; PRTR = Designated Chemical Substance Law (Japan); PSD = Short Term Exposure Limit (Indonesia); RCRA = Resource Conservation and Recovery Act; REACH = Registration, Evaluation, Authorisation and Restriction of Chemical Substances; REL = Recommended Exposure Limit; RID = Transport of Dangerous Goods by Rail; SARA = Superfund Amendments and Reauthorization Act; SCBA = Self Contained Breathing Apparatus; SDS = Safety Data Sheet; SEPA = State Environmental Protection Administration; STEL = Short Term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average; UEL = Upper Explosive Limit; UFL = Upper Flammable Limit; VLA-ED = Valor límite Ambiental de Exposición Diaria (Environmental Exposure Daily Limit Value); VME = valeur limite d'exposition (Occupational Exposure Limits); WHMIS = Workplace Hazardous Materials Information Systems

MSDS Prepared by: NOVA Chemicals

MSDS Information Phone Number: 1-412-490-4063

Other Information

Notice to Reader:

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This is the end of MSDS # NOVA-0029.

SAFETY DATA SHEET

1. Identification of the substance or mixture and of the supplier

GHS Product identifier: NOVAPOL® Polyethylene (Grades that Contain Diatomaceous Earth)

Other means of identification

Common name(s), synonym(s): LDPE, HPLDPE, MDPE Polyethylene resins, ethylene polymers

SDS number NOVA-0029B

Recommended use of the chemical and restrictions on use

Recommended use: Thermoplastic resin extruded into film, sheet or moulded into containers and other shapes.

Recommended restrictions: All uses other than the identified.

Supplier's details

Supplier

Company Name: NOVA Chemicals International (SA)
Address: Avenue de la Gare 14
1700 Fribourg, Switzerland
Telephone: +41-26-426-5757
SDS Information Email: msdsemail@novachem.com

Emergency telephone number:

+1-800-561-6682, +1-403-314-8767 (NOVA Chemicals) (24 hours)

Vietnam: +84 28 4458 2388 (NCEC) (24 hours)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: not applicable

Precautionary Statements:

Prevention: Keep out of reach of children. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting] equipment. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. [In case of inadequate ventilation] wear respiratory protection.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention. IF ON SKIN: Wash with plenty of water/soap. If skin irritation occurs: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage: Store in accordance with local/regional/national regulations. Protect from sunlight.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations. Refer to manufacturer or supplier for information on recovery or recycling.

Other hazards which do not result in GHS classification: This mixture is a preparation containing polymers and additives. Although it may contain components that may be classified, the product does not present a danger to human health by inhalation, ingestion or contact with the skin or to the aquatic environment in the form in which it is placed on the market. *If small particles are generated during further processing, handling or by other means,* may form combustible dust concentrations in air. Spilled product may create a dangerous slipping hazard. Under fire conditions, product will readily burn and emit irritating smoke. Molten material will produce thermal burns. Polyethylene is an essentially biologically inert solid and considered non-toxic. It is stable (does not decompose) in landfills or in aquatic systems.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Silica, cristobalite	Crystalline silica	14464-46-1	0,1 - 0,3%

* All concentrations are percent by weight.

Additional Information: The silica, cristobalite is inextricably bound or coated in the resin.

4. First-aid measures

Description of necessary first-aid measures

Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.

Skin Contact: IF ON SKIN: Wash with plenty of water/soap. If skin irritation occurs: Get medical advice/attention.

Eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: Thermal burns. Respiratory irritation. Mechanical irritation. The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.

Indication of immediate medical attention and special treatment needed

Treatment: After adequate first aid, no further treatment is required unless symptoms reappear. For more detailed medical emergency support information, call +1-800-561-6682 or +1-403-314-8767 (24 hours, NOVA Chemicals Emergency Response). Burns should be treated as thermal burns. Molten resin will come off as healing occurs; therefore, immediate removal from the skin is not necessary. Treatment should be directed at the control of symptoms and the clinical condition of the patient. No adverse effects due to ingestion are expected. The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.

5. Fire-fighting measures

General Fire Hazards: Solid resins support combustion but do not meet combustible definition. Product will burn at high temperatures but is not considered flammable. Under fire conditions, product will readily burn and emit irritating smoke. Powdered material may form explosive dust-air mixtures.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water fog or water spray. Small fires: Dry chemical, carbon dioxide (CO_2) or foam.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: Upon heating, polyethylene may emit various oligomers, waxes and oxygenated hydrocarbons as well as carbon dioxide, carbon monoxide and small amounts of other organic vapours (e.g. aldehydes, acrolein). Inhalation of these decomposition products may be hazardous. Powdered material may form explosive dust-air mixtures. Risk of dust-air explosion is increased if flammable vapours are also present. Static discharge: material can accumulate static charges which may cause an incendiary electrical discharge.

Special protective action for firefighters

Special fire fighting procedures: Keep upwind. Keep unauthorised personnel away. Move containers from fire area if you can do so without risk. Fight fire from maximum distance or use unmanned holders or monitor nozzles. Apply extinguishing media carefully to avoid creating airborne dust. Water may be used to flood the area. Use water spray to cool fire exposed surfaces and to protect personnel. Avoid inhaling any smoke and combustion materials. Remove and isolate contaminated clothing and shoes. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

Special protective equipment for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Alert stand-by emergency and fire fighting personnel. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Environmental Precautions: Prevent entry into waterways, sewer, basements or confined areas.

Methods and material for containment and cleaning up: Wear appropriate personal protective equipment. Do not touch or walk through spilled material. In case of leakage, eliminate all ignition sources. Stop leak if safe to do so. Prevent entry into waterways, sewer, basements or confined areas. Spilled product may create a dangerous slipping hazard. Use appropriate tools to put the spilled solid in an appropriate disposal or recovery container. Recover and reclaim or recycle, if practical. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

7. Handling and storage

Precautions to ensure safe handling:

Keep out of reach of children. Keep away from uncontrolled heat and incompatible materials. Ground all material handling and transfer equipment. Wash hands thoroughly after handling. Prevent dust accumulation to minimise explosion hazard. For additional information on control of static and minimizing potential dust and fire hazards, refer to NFPA-654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids, 2013 Edition". Use in a well-ventilated area. Avoid release to the environment. Wear eye protection/protective gloves as needed/wear full face-shield during thermal processing if contact with molten material is possible/wear respirator if dusty. Spilled product may create a dangerous slipping hazard.

Conditions for safe storage, including any incompatibilities:

Store in accordance with all current regulations and standards. Storage area should be clearly identified, well-illuminated and clear of obstruction. Store in closed, grounded and properly designed vessels. Keep away from uncontrolled heat and incompatible materials. Protect from sunlight. Outdoor storage of product in bags requires protection from ultra-violet sunlight by use of a UV stabilized bag or alternate means. Avoid accumulation of dust by frequent cleaning and suitable construction of storage and handling areas. Keep shovels and vacuum systems readily available for cleanup of loose material. DO NOT enter filled bulk containers and attempt to walk over product, due to risk of slipping and possible suffocation. Use a fall arrest system when working near open bulk containers.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

During dusty conditions ACGIH recommends for Particles (insoluble or poorly soluble) not otherwise specified a TWA of 10 mg/m3 (inhalable particles), 3 mg/m3 TWA (respirable particles).
The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.

Chemical Identity	Type	Exposure Limit Values	Source
Silica, cristobalite	TWA	0,025 mg/m3	US. ACGIH Threshold Limit Values (03 2014)

Appropriate Engineering Controls

Engineering methods to reduce hazardous exposure are preferred controls. Methods include mechanical ventilation (dilution and local exhaust) process or personal enclosure, remote and automated operation, control of process conditions, leak detection and repair systems, and other process modifications. Ensure all exhaust ventilation systems are discharged to outdoors, away from air intakes and ignition sources. Supply sufficient replacement air to make up for air removed by exhaust systems. Administrative (procedure) controls and use of personal protective equipment may also be required. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Use only appropriately classified electrical equipment and powered industrial trucks.

Individual protection measures, such as personal protective equipment

General information:	Personal protective equipment (PPE) should not be considered a long-term solution to exposure control. Employer programs to properly select, fit, maintain and train employees to use equipment must accompany PPE. Consult a competent industrial hygiene resource, the PPE manufacturer's recommendation, and/or applicable regulations to determine hazard potential and ensure adequate protection.
Eye/face protection:	Safety glasses. Wear a face shield when working with molten material.
Skin Protection	
Hand Protection:	Wear gloves to protect against thermal burns.
Other:	Wear appropriate clothing to prevent any possibility of skin contact. Wear work clothes with long sleeves and pants. Safety footwear with good traction is recommended to help prevent slipping. Static Dissipative (SD) rated footwear is also recommended.
Respiratory Protection:	Appropriate approved air-purifying respirator or self-contained breathing apparatus should be used. Air supplied breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.
Hygiene measures:	Use effective control measures and PPE to maintain worker exposure to concentrations that are below these limits. Ensure that eyewash stations and safety showers are in close proximity to work locations.

9. Physical and chemical properties

Appearance	
Physical state:	solid
Form:	Pellets or Granular powder
Colour:	white / colourless / translucent
Odour:	Minimal, Mild
Odour threshold:	No data available.
pH:	not applicable
Melting point/freezing point:	105 - 125 °C (221 - 257 °F) (Melting Point) 80 - 105 °C (176 - 221 °F) (Softening point)
Initial boiling point and boiling range:	not applicable
Flash Point:	not applicable
Evapouration rate:	not applicable
Flammability (solid, gas):	May form combustible dust concentrations in air.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	not applicable
Flammability limit - lower (%):	not applicable
Vapour pressure:	not applicable
Vapour density:	not applicable
Relative density:	0,910 - 0,940
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	not applicable
Auto-ignition temperature:	330 - 410 °C (626 - 770 °F)
Decomposition temperature:	> 300 °C (> 572 °F)
Viscosity:	not applicable

10. Stability and reactivity

Reactivity:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization not likely to occur.
Conditions to Avoid:	Avoid exposing to heat and contact with strong oxidising substances. Avoid processing material over 300 °C (572 °F).
Incompatible Materials:	Strong oxidising agents. Organic solvents, ether, gasoline, lubricating oils, chlorinated hydrocarbons and aromatic hydrocarbons may react with and degrade polyethylene. Powdered material may form explosive dust-air mixtures. Risk of dust-air explosion is increased if flammable vapours are also present.
Hazardous Decomposition Products:	Upon decomposition, polyethylene may emit various oligomers, waxes and oxygenated hydrocarbons as well as carbon dioxide, carbon monoxide and small amounts of other organic vapours (e.g. aldehydes, acrolein). Inhalation of these decomposition products may be hazardous.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Ingestion of this product is not a likely route of exposure.
Inhalation:	During processing, thermal fumes and inhalation of fine particles may cause respiratory irritation. The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.
Skin Contact:	During processing, contact with powder or fines may cause mechanical irritation. Molten material will produce thermal burns. The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.
Eye contact:	During processing, contact with powder or fines may cause mechanical irritation. Molten material will produce thermal burns. The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No adverse effects due to ingestion are expected.
Inhalation:	Respiratory irritation.
Skin Contact:	Mechanical irritation. Thermal burns. Negligible irritation of the skin based on chemical structure (polymer).
Eye contact:	Mechanical irritation. Thermal burns. May cause mild, short-lasting discomfort to eyes.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	LD50: > 5.000 mg/kg (estimated)

Dermal
Product: Not classified for acute toxicity based on available data.

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):
Silica, cristobalite — Irritating. May cause abrasion to skin. The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.

Serious Eye Damage/Eye Irritation
Product: No data available.

Specified substance(s):

Silica, cristobalite — Irritating. May cause abrasion to cornea. The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.

Respiratory or Skin Sensitisation
Product: No data available.

Carcinogenicity
Product: Not classified

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
Silica, cristobalite — Overall evaluation: 1. Carcinogenic to humans.

ACGIH Carcinogens:
Silica, cristobalite — Group A2: Suspected human carcinogen.

Germ Cell Mutagenicity

In vitro
Product: There are no known or reported genetic effects.

In vivo
Product: There are no known or reported genetic effects.

Reproductive toxicity
Product: There are no known or reported reproductive effects.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Specified substance(s):
Silica, cristobalite — Lungs, Respiratory system - The silica, cristobalite is inextricably bound or coated in the resin, which minimizes the likelihood of exposure.

Aspiration Hazard
Product: Not classified.

Other effects: No data available.

12. Ecological information

General information: NOVAPOL® resins are expected to be inert in the environment. They float on water and are not biodegradable. They are not expected to bioconcentrate (accumulate in the food chain) due to their high molecular weight. NOVAPOL® pellets are not expected to be toxic if ingested but may represent a choking hazard if ingested by waterfowl or aquatic life.

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: LC 50 (96 h): > 100 mg/l

Aquatic Invertebrates
Product: EC 50 (Daphnia magna, 48 h): > 100 mg/l

Toxicity to aquatic plants
Product: EC 50 (72 h): > 100 mg/l

Chronic hazards to the aquatic environment:

Fish
Product: NOEC : > 100 mg/l

Aquatic Invertebrates
Product: NOEC : > 100 mg/l

Toxicity to aquatic plants
Product: NOEC : > 100 mg/l

Persistence and Degradability

Biodegradation
Product: Not readily degradable. Under optimal oxidation conditions, >99% of polyethylene will remain intact after exposure to microbial actions. Product will slowly change (embrittle) in the presence of sunlight, but will not fully breakdown. Product buried in landfill has been found to be stable over time. No toxic degradation products are known to be produced.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: Pellets may accumulate in the digestive systems of birds and aquatic life, causing injury and possible death due to starvation.

Partition Coefficient n-octanol / water (log Kow)
Product: Log Kow: not applicable

Mobility in Soil: Biologically persistent. This product has not been found to migrate through soils.

Other Adverse Effects: Pellets are persistent in aquatic and terrestrial systems.

13. Disposal considerations

Disposal methods

Disposal instructions: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Preferred disposal methods for polyethylene in order of preference are: 1) clean and reuse if possible, 2) recover and resell through plastic recyclers or resin brokers, 3) incinerate with waste heat recovery and 4) landfill. DO NOT ATTEMPT TO DISPOSE OF BY UNCONTROLLED INCINERATION. Open burning of plastics at landfills should not be undertaken.

Contaminated Packaging: Check regional, national and local environmental regulations prior to disposal.

14. Transport information

IMDG

Not regulated.

IATA

Not regulated.

15. Regulatory information

Federal regulations

Vietnam. Ozone Depleting Substances (ODS) (Joint Circular No. 14/2005/TTLT-BTM-BTNMT)

Not regulated

Inventory status

Canada DSL Inventory List:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory

16.Other information, including date of preparation or last revision

Issue Date: 20.02.2018
Revision Information: 20.02.2018: New SDS
Version #: 0.0

Source of information: Available on request.

Other information: Exposure to the Hazardous Combustion and Decomposition Products as described in the SDS, Sections 5 and 10, may be linked with various acute and chronic health effects. These effects include irritation of eyes and upper respiratory tract primarily from the aldehydes, breathing difficulties, systemic toxicity such as liver, kidney, and central nervous system effects.

NOVA Chemicals has monitored worker exposures to emissions during commercial-scale processing of polyethylene. Concentrations of hazardous decomposition products were determined to be well below established exposure limits in the workplace. "Quantitation of Employee Exposure to Emission Products Generated By Commercial-Scale Processing of Polyethylene" is available in the Am. Ind. Hyg. Assoc. J. 56:809-814 (1995) and "Quantification of Emission Compounds Generated During Commercial-Scale Processing of Advanced SCLAIRTECH™ Polyethylene" is available in the Journal of Plastic Film & Sheeting Volume 26 Issue 2, April 2010.
For information on ventilation considerations for the control of volatile air contaminants from polyethylene, please request a copy of NOVA Chemicals' publication, "Ventilation Guidelines for Heat-Processing Polyethylene Resins".

For additional information on unloading hopper cars containing plastic resins, refer to NOVA Chemicals' publication, "Hopper Car Unloading Guide".

For information on processing properties, selection of NOVAPOL resin grades, refer to the NOVAPOL Product Data Sheets available on our web site, under Products & Applications: http://www.novachemicals.com.

For additional information on preventing pellet loss, refer to published plastic industry publications and resources under 'Operation Clean Sweep'; now downloadable from the web at http://www.opcleansweep.org/.

Polyethylene fines and dust particles are listed as a Class I combustible dust by the National Fire Protection Association (see NFPA-68, Table F.1 (e)). For additional information on control of static and minimizing potential dust and fire hazards, refer to NFPA-654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids, 2013 Edition".

Explosivity testing was done on one NOVAPOL® LLDPE, one LDPE and one HDPE resins with Pmax = 4.8-5.7 bar, Kst = 12-17 (bar m/s) and Minimum Ignition Energy (MIE) = 1000-10,000; dust explosion class = St 1; this data was obtained for polyethylene with a final particle size of 100% <250 um and moisture content between 0 and 0.2%. Similar results are expected for the remaining NOVAPOL® polyethylene resin grades.

For NOVAPOL resin grade specific information including food contact compliance statements, please contact your sales representative or refer to NOVA Chemicals' polyethylene Product Data Sheets.

Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists; BOD = Biochemical Oxygen Demand; CAS = Chemical Abstracts Service; EC50 = Effective Concentration 50%; GHS = Globally Harmonized System for the Classification and Labelling of Chemicals; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IMDG = International Maritime Dangerous Goods; Kow = Octanol/water partition coefficient; LC50 = Lethal Concentration 50%; LD50 = Lethal Dose 50%; NCEC = National Chemical Emergency Centre; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; NRCC = National Registration Centre for Chemicals; OEL = Occupational Exposure Limit; OSHA = Occupational Safety and Health Administration; PNOC = Particulates Not Otherwise Classified; PPE = Personal Protective Equipment; SCBA = Self Contained Breathing Apparatus; SDS = Safety Data Sheet; STEL = Short Term Exposure Limit; TLV = Threshold Limit Value; TWA = Time Weighted Average

Disclaimer:

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MATERIAL SAFETY DATA SHEET

WORKING COPY

Date Issued: 07/06/2007
MSDS No: 350000003666
Revision No: New MSDS

OUST® SURFACE DISINFECTANT & AIR SANITIZER - CLEAN SCENT

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: OUST® SURFACE DISINFECTANT & AIR SANITIZER - CLEAN SCENT
GENERAL USE: Household: Air care

MANUFACTURER:

S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-5011
24 Hr. Medical & Transport Emergency
Phone: (866) 231-5406
24 Hr. International Medical Emergency
Phone: (952) 852-4647

CANADIAN ADDRESS:

S.C. Johnson and Son, Limited
1 Webster Street
Brantford, Ontario N3T 5R1

24 Hr. Canadian Transport Emergency:
CANUTEC (Canadian Transportation):(613) 996 - 6666

REGISTRATION INFORMATION: EPA Reg Number 4822-548

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE/ODOR: Colorless spray mist. Fragrant odor.

IMMEDIATE CONCERNS: CAUTION: Eye irritant. Avoid contact with eyes. CONTENTS UNDER PRESSURE. Do not puncture or incinerate. Do not store at temperatures above 120 Deg. F (50 Deg. C).

POTENTIAL HEALTH EFFECTS

EYES: May cause: Moderate eye irritation.

SKIN: Prolonged or repeated contact may cause: Drying/defatting of skin.

INGESTION: May cause: Abdominal discomfort. Ingestion may cause headache, dizziness, fatigue, and central nervous system depression.

INHALATION: High concentrations may lead to central nervous system effects such as drowsiness, dizziness, headaches and/or nausea.

MEDICAL CONDITIONS AGGRAVATED: Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.

ROUTES OF ENTRY: Eye contact. Skin contact. Inhalation. Ingestion.

3. COMPOSITION / INFORMATION ON INGREDIENTS

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Chemical Name	Wt.%	CAS	EINECS
n-Alkyl dimethyl benzyl ammonium saccharinate	0.2	068989-01-5	
Triethylene Glycol	6	000112-27-6	203-953-2
Propane	5 - 10	000074-98-6	- -
Isobutane	10 - 20	000075-28-5	- -
Ethanol	30 - 40	000064-17-5	200-578-6
Water	30 - 40	007732-18-5	

4. FIRST AID MEASURES

EYES: Flush immediately with plenty of water for at least 15 to 20 minutes. If irritation persists, get medical attention.

SKIN: Wash contaminated area with water and soap. If irritation develops, get medical attention.

INGESTION: Do not induce vomiting! Immediately drink 1-2 glasses of water or milk. Do not administer anything by mouth to an unconscious person. Get medical attention immediately.

INHALATION: Remove to fresh air. If breathing is affected, get medical attention.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: < -7°C (20°F) (TCC) (propellant)

FLAMMABLE LIMITS:
Notes: Not Available

AUTOIGNITION TEMPERATURE: Not Available

FLAMMABLE CLASS: NFPA 30B Level 2 Aerosol.

EXTINGUISHING MEDIA: Foam. CO2. Dry chemical. Water fog.

EXPLOSION HAZARDS: Aerosol product - Containers may rocket or explode in heat of fire.

FIRE FIGHTING PROCEDURES: Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Fire fighters should wear self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: Eliminate all ignition sources. Absorb with oil-dri or similar inert material. Sweep or scrape up and containerize. Rinse affected area thoroughly with water.

7. HANDLING AND STORAGE

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OUST® SURFACE DISINFECTANT & AIR SANITIZER - CLEAN SCENT

GENERAL PROCEDURES: Use only as directed. Observe good personal hygiene practices.

HANDLING: Do not puncture or incinerate. Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. Keep out of reach of children and pets. Wash thoroughly after handling.

STORAGE: Do not store at temperatures above 120 °F (50 °C). Store in a cool, dry place with adequate ventilation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OCCUPATIONAL EXPOSURE LIMITS					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		**ppm**	**mg/m³**	**ppm**	**mg/m³**
Propane	**TWA**	1000 ppm	1800 mg/m3	1000 ppm	
Ethanol	**TWA**	1000 ppm	1900 mg/m3	1000 ppm	1884

ENGINEERING CONTROLS: General room ventilation is normally adequate. Substantial amounts of mists/vapors can be controlled with local exhaust ventilation or respiratory protection.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: No special requirements under normal use conditions.

SKIN: No special requirements under normal use conditions.

RESPIRATORY: No special requirements under normal use conditions.

OTHER USE PRECAUTIONS: No special requirements. If major exposure is possible to eyes/skin, wear/use appropriate protective equipment.

COMMENTS: ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients except as noted in the table above.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Dispensed as a spray mist.

ODOR: Fragrant

COLOR: Clear, Colorless

pH: 7.0 to 8.0

PERCENT VOLATILE: > 90.0%

VAPOR PRESSURE: Not Available

VAPOR DENSITY: Not Available

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BOILING POINT: Not Available

FREEZING POINT: < (32°F)

FLASHPOINT AND METHOD: < -7°C (20°F) (TCC) (propellant)

SOLUBILITY IN WATER: Dispersible

SPECIFIC GRAVITY: < 1.000

10. STABILITY AND REACTIVITY

STABILITY: Stable.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Sources of ignition (sparks, flame). Excessive heat.

INCOMPATIBLE MATERIALS: Strong oxidizing materials (e.g. liquid chlorine).

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD_{50}: > 5000 mg/kg (rabbit)

ORAL LD_{50}: > 5000 mg/kg (rat)

INHALATION LC_{50}: > 6.27 mg/L (rat)

CARCINOGENICITY

Notes: None known.

SENSITIZATION: None known.

REPRODUCTIVE EFFECTS: None known.

TERATOGENIC EFFECTS: None known.

MUTAGENICITY: None known.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Not Available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: PESTICIDAL WASTE - Observe all applicable Federal/ Provincial/ State regulations and Local/ Municipal ordinances regarding disposal of pesticide wastes. If possible, recycle empty aerosol can to nearest steel recycling center. Use up package or give to someone who can.

RCRA HAZARD CLASS: D001 (Ignitable Waste)

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OUST® SURFACE DISINFECTANT & AIR SANITIZER - CLEAN SCENT

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Aerosols, flammable

PRIMARY HAZARD CLASS/DIVISION: 2.1

UN/NA NUMBER: UN 1950

PACKING GROUP: None

NOTE: S.C. Johnson ships this product as: Consumer Commodity ORM-D (non-bulk packages)

AIR (ICAO/IATA)

SHIPPING NAME: Aerosols, flammable

UN/NA NUMBER: UN 1950

PRIMARY HAZARD CLASS/DIVISION: 2.1

PACKING GROUP: None

NOTE: S.C. Johnson typically does not ship products via air, therefore it has not been determined if the current product container meets current IATA/ICAO package criteria. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

VESSEL (IMO/IMDG)

SHIPPING NAME: Aerosols

UN/NA NUMBER: UN 1950

PRIMARY HAZARD CLASS/DIVISION: 2.1

PACKING GROUP: None

NOTE: S.C. Johnson ships this product as "Limited Quantity" when container quantity value is 1000 ml or less.

15. REGULATORY INFORMATION

UNITED STATES

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Inventory.

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STATES WITH SPECIAL REQUIREMENTS

Chemical Name	Requirements
Triethylene Glycol	112-27-6 is included on the following U.S. State Government Lists: Pennsylvania Right-to-Know Hazardous Substances List
Propane	74-98-6 is included on the following U.S. State Government Lists: Massachusetts Oil & Hazardous Material List Massachusetts Right-to-Know Substances List Minnesota Right-to-Know Hazardous Substances List New Jersery Right-to-Know Substances List Pennsylvania Right-to-Know Hazardous Substances List
Isobutane	75-28-5 is included on the following U.S. State Government Lists: Massachusetts Oil & Hazardous Material List Massachusetts Right-to-Know Substances List New Jersery Right-to-Know Substances List New Jersey - Discharge Prevention - List of Hazardous Substances Pennsylvania Right-to-Know Hazardous Substances List
Ethanol	64-17-5 is included on the following U.S. State Government Lists: Massachusetts Right-to-Know Substances List Massachusetts Oil & Hazardous Material List Minnesota Right-to-Know Hazardous Substances List New Jersery Right-to-Know Substances List Pennsylvania Right-to-Know Hazardous Substances List

CALIFORNIA PROPOSITION 65: This product is not subject to the reporting requirements under California's Proposition 65.

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS CLASS: B,5;

CANADIAN ENVIRONMENTAL PROTECTION ACT: All ingredients in this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

16. OTHER INFORMATION

REASON FOR ISSUE: New format.

APPROVED BY: SCJ Global Safety Assessment & Reg. Affairs

MATERIAL SAFETY DATA SHEET

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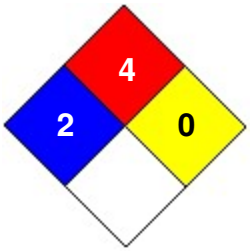
MSDS No: 350000003666
Revision No: New MSDS

OUST® SURFACE DISINFECTANT & AIR SANITIZER - CLEAN SCENT

HMIS RATING

HEALTH:	2
FLAMMABILITY:	4
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA CODES



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MONSANTO COMPANY

Material Safety Data Sheet
Commercial Product

1. PRODUCT AND COMPANY IDENTIFICATION

Product name
Ranger® PRO Herbicide

EPA Reg. No.
524-517
Product use
Herbicide
Chemical name
Not applicable.
Synonyms
None.
Company
MONSANTO COMPANY, 800 N. Lindbergh Blvd., St. Louis, MO, 63167
Telephone: 800-332-3111, **Fax:** 314-694-5557
Emergency numbers
FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted).
FOR MEDICAL EMERGENCY - Day or Night: 314-694-4000 (collect calls accepted).

2. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient
Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}

Composition

COMPONENT	CAS No.	% by weight (approximate)
Isopropylamine salt of glyphosate	38641-94-0	41
Other ingredients		59

The specific chemical identity is being withheld because it is trade secret information of Monsanto Company.

OSHA Status
This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

Emergency overview
Appearance and odour (colour/form/odour): Amber / Liquid / Sweet

CAUTION!
CAUSES EYE IRRITATION

Potential health effects
Likely routes of exposure
Skin contact, eye contact
Eye contact, short term
May cause temporary eye irritation.

Skin contact, short term
Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation, short term
Not expected to produce significant adverse effects when recommended use instructions are followed.

Refer to section 11 for toxicological and section 12 for environmental information.

4. FIRST AID MEASURES

Eye contact
If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

Skin contact
Take off contaminated clothing, wristwatch, jewellery.
Wash affected skin with plenty of water.
Wash clothes and clean shoes before re-use.

Inhalation
Remove to fresh air.

Ingestion
Immediately offer water to drink.
Do NOT induce vomiting unless directed by medical personnel.
If symptoms occur, get medical attention.

Advice to doctors
This product is not an inhibitor of cholinesterase.

Antidote
Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

Flash point
None.

Extinguishing media
Recommended: Water, foam, dry chemical, carbon dioxide (CO2)

Unusual fire and explosion hazards
Minimise use of water to prevent environmental contamination.
Environmental precautions: see section 6.

Hazardous products of combustion
Carbon monoxide (CO), phosphorus oxides (PxOy), nitrogen oxides (NOx)

Fire fighting equipment
Self-contained breathing apparatus.
Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protection recommended in section 8.

Environmental precautions
SMALL QUANTITIES:
Low environmental hazard.
LARGE QUANTITIES:
Minimise spread.
Keep out of drains, sewers, ditches and water ways.
Notify authorities.

Methods for cleaning up
SMALL QUANTITIES:
Flush spill area with water.
LARGE QUANTITIES:
Absorb in earth, sand or absorbent material.
Dig up heavily contaminated soil.
Collect in containers for disposal.
Refer to section 7 for types of containers.
Flush residues with small quantities of water.
Minimise use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

Handling
When using do not eat, drink or smoke.
Wash hands thoroughly after handling or contact.
Thoroughly clean equipment after use.
Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.
Emptied containers retain vapour and product residue.
Refer to section 13 for disposal of rinse water.
Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.

Storage
Minimum storage temperature: -15 °C
Maximum storage temperature: 50 °C
Compatible materials for storage: stainless steel, aluminium, fibreglass, plastic, glass lining
Incompatible materials for storage: galvanised steel, unlined mild steel, see section 10.
Keep out of reach of children.
Keep away from food, drink and animal feed.
Keep only in the original container.
Partial crystallization may occur on prolonged storage below the minimum storage temperature.
If frozen, place in warm room and shake frequently to put back into solution.
Minimum shelf life: 5 years.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

Engineering controls

No special requirement when used as recommended.

Eye protection
If there is significant potential for contact:
Wear chemical goggles.

Skin protection
No special requirement when used as recommended.
If repeated or prolonged contact:
Wear chemical resistant gloves.

Respiratory protection
No special requirement when used as recommended.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Colour/colour range:	Amber
Form:	Liquid
Odour:	Sweet
Flash point:	None.
Specific gravity:	1.169 @ 20 °C / 15.6 °C
Solubility:	Water: Completely miscible.
pH:	4.4 - 5.0
Partition coefficient (log Pow):	< 0.00 (active ingredient)

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions of handling and storage.

Hazardous decomposition
Thermal decomposition: Hazardous products of combustion: see section 5.

Materials to avoid/Reactivity
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Data obtained on similar products and on components are summarized below.

Similar formulation

Acute oral toxicity
Rat, LD50: 5,108 mg/kg body weight
Practically non-toxic.
FIFRA category IV.

Acute dermal toxicity
Rat, LD50 (limit test): > 5,000 mg/kg body weight
Practically non-toxic.
FIFRA category IV.
No mortality.
Skin irritation
Rabbit, 6 animals, OECD 404 test:
Days to heal: 3
Primary Irritation Index (PII): 0.5/8.0
Essentially non irritating.
FIFRA category IV.
Eye irritation
Rabbit, 6 animals, OECD 405 test:
Days to heal: 3
Slight irritation.
FIFRA category III.
Acute inhalation toxicity
Rat, LC50, 4 hours, aerosol: 2.9 mg/L
Other effects: weight loss, breathing difficulty
Practically non-toxic.
FIFRA category IV.
Skin sensitization
Guinea pig, Buehler test:
Positive incidence: 0 %

N-(phosphonomethyl)glycine; {glyphosate}

Mutagenicity
In vitro and in vivo mutagenicity test(s):
Not mutagenic.
Repeated dose toxicity
Rabbit, dermal, 21 days:
NOAEL toxicity: > 5,000 mg/kg body weight/day
Target organs/systems: none
Other effects: none
Rat, oral, 3 months:
NOAEL toxicity: > 20,000 mg/kg diet
Target organs/systems: none
Other effects: none
Carcinogenicity
Mouse, oral, 24 months:
NOEL tumour: > 30,000 mg/kg diet
NOAEL toxicity: ~ 5,000 mg/kg diet
Tumours: none
Target organs/systems: liver
Other effects: decrease of body weight gain, histopathologic effects
Rat, oral, 24 months:
NOEL tumour: > 20,000 mg/kg diet
NOAEL toxicity: ~ 8,000 mg/kg diet
Tumours: none
Target organs/systems: eyes
Other effects: decrease of body weight gain, histopathologic effects
Toxicity to reproduction/fertility
Rat, oral, 3 generations:
NOAEL toxicity: > 30 mg/kg body weight
NOAEL reproduction: > 30 mg/kg body weight
Target organs/systems in parents: none

Other effects in parents: none
Target organs/systems in pups: none
Other effects in pups: none

Developmental toxicity/teratogenicity

Rat, oral, 6 - 19 days of gestation:
NOAEL toxicity: 1,000 mg/kg body weight
NOAEL development: 1,000 mg/kg body weight
Other effects in mother animal: decrease of body weight gain, decrease of survival
Developmental effects: weight loss, post-implantation loss, delayed ossification
Effects on offspring only observed with maternal toxicity.

Rabbit, oral, 6 - 27 days of gestation:
NOAEL toxicity: 175 mg/kg body weight
NOAEL development: 175 mg/kg body weight
Target organs/systems in mother animal: none
Other effects in mother animal: decrease of survival
Developmental effects: none

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

Data obtained on product and components are summarized below.

Aquatic toxicity, fish

Rainbow trout (Oncorhynchus mykiss):
Acute toxicity, 96 hours, static, LC50: 5.4 mg/L
Moderately toxic.

Bluegill sunfish (Lepomis macrochirus):
Acute toxicity, 96 hours, static, LC50: 7.3 mg/L
Moderately toxic.

Aquatic toxicity, invertebrates

Water flea (Daphnia magna):
Acute toxicity, 48 hours, static, EC50: 11 mg/L
Slightly toxic.

Avian toxicity

Mallard duck (Anas platyrhynchos):
Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
Practically non-toxic.

Bobwhite quail (Colinus virginianus):
Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
Practically non-toxic.

Arthropod toxicity

Honey bee (Apis mellifera):
Oral/contact, 48 hours, LD50: > 100 µg/bee
Practically non-toxic.

Soil organism toxicity, invertebrates

Earthworm (Eisenia foetida):
Acute toxicity, 14 days, LC50: > 1,250 mg/kg soil
Practically non-toxic.

N-(phosphonomethyl)glycine; {glyphosate}

Bioaccumulation

Bluegill sunfish (Lepomis macrochirus):
Whole fish: BCF: < 1
No significant bioaccumulation is expected.

Dissipation

Soil, field:
Half life: 2 - 174 days
Koc: 884 - 60,000 L/kg
Adsorbs strongly to soil.
Water, aerobic:
Half life: < 7 days

13. DISPOSAL CONSIDERATIONS

Product
Excess product may be disposed of by agricultural use according to label instructions.
Keep out of drains, sewers, ditches and water ways.
Recycle if appropriate facilities/equipment available.
Burn in proper incinerator.
Follow all local/regional/national/international regulations.

Container
See the individual container label for disposal information.
Emptied containers retain vapour and product residue.
Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.
Empty packaging completely.
Triple or pressure rinse empty containers.
Do NOT contaminate water when disposing of rinse waters.
Ensure packaging cannot be reused.
Do NOT re-use containers.
Store for collection by approved waste disposal service.
Recycle if appropriate facilities/equipment available.
Follow all local/regional/national/international regulations.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not hazardous under the applicable DOT, ICAO/IATA, IMO, TDG and Mexican regulations.

15. REGULATORY INFORMATION

TSCA Inventory
All components are on the US EPA's TSCA Inventory

OSHA Hazardous Components
Surfactant

SARA Title III Rules
Section 311/312 Hazard Categories
Immediate
Section 302 Extremely Hazardous Substances
Not applicable.
Section 313 Toxic Chemical(s)
Not applicable.

CERCLA Reportable quantity
Not applicable.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.
Follow all local/regional/national/international regulations.
Please consult supplier if further information is needed.
In this document the British spelling was applied.

	Health	Flammability	Instability	Additional Markings
NFPA	2	1	1	

0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, MONSANTO Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for the purposes prior to use. In no event will MONSANTO Company be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR TO THE PRODUCT TO WHICH INFORMATION REFERS.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Nufarm Weedar® 64 Broadleaf Herbicide**
EPA Reg. No.: 71368-1
Product Type: Herbicide

Company Name: Nufarm Inc.
11901 S. Austin Avenue
Alsip, IL 60803
1-800-345-3330

Telephone Numbers: **For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,**
Call CHEMTREC Day or Night: 1-800-424-9300
For Medical Emergencies Only, Call 1-877-325-1840

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. HAZARDS IDENTIFICATION

PHYSICAL HAZARDS:
Not hazardous

HEALTH HAZARDS:

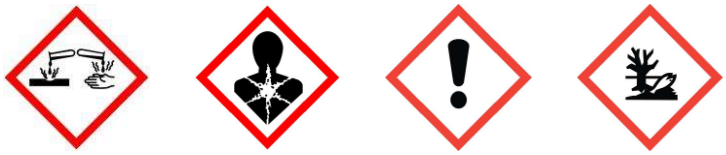
Eye Damage/Irritation	Category 1
Acute toxicity, oral	Category 4
Specific target organ toxicity – Repeated exposure	Category 2

ENVIRONMENTAL HAZARDS:

Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

SIGNAL WORD:
DANGER

HAZARD STATEMENTS:
Causes serious eye damage. Harmful if swallowed. May cause damage to organs (liver, kidneys) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.



PRECAUTIONARY STATEMENTS
Wear face shield, goggles or safety glasses with side protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Toxic to aquatic life with long lasting effects.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor if you feel unwell. Rinse mouth. Dispose of contents and container in accordance with local and state regulations.

Avoid unintended release to the environment.

Collect spillage.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	45.4 – 48.2
Other Ingredients	Trade Secret	Trade Secret

Synonyms: 2,4-D DMA; 2,4-Dichlorophenoxyacetic acid, dimethylamine salt

Ingredients not precisely identified are proprietary or non-hazardous. Values are not products specifications.

4. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Most Important symptoms/effects: Eye irritation

Indication of Immediate medical attention and special treatment if needed: There is no specific antidote if this product is ingested. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.
Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Unusual Fire and Explosion Hazards: Containers will burst from internal pressure under extreme fire conditions. If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways.
Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.
Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.
Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.
Methods for Cleanup and Disposal: Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.
Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

HANDLING:

Avoid breathing vapors or spray mist. Do not get in eyes, on skin or on clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE:
Store in original container in a dry, secured storage area. Keep container tightly closed when not in use. Store at temperatures above 32° F. If allowed to freeze, warm to at least 40° F and remix before using. Freezing does not alter the product. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:
Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:
Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or face shield. An emergency eyewash or water supply should be readily accessible to the work area.
Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, shoes and socks, and chemical-resistant gloves. For use according to product label, chemical-resistant gloves are not required for applicators using ground boom equipment. Wear a chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate. An emergency shower or water supply should be readily accessible to the work area.
Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.
General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored;
2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

	OSHA		ACGIH		
Component	**TWA**	**STEL**	**TWA**	**STEL**	**Unit**
DMA Salt of 2,4-D	10*	NE	10*	NE	mg/m^3
Other Ingredients	N/A	N/A	N/A	N/A	

*Based on adopted limit for 2,4-D

NE= Not Established
N/A= Not Applicable

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, colorless to dark yellow liquid
Odor:	Mild phenolic amine
Odor threshold:	No data available
pH:	6.9-9
Melting point/freezing point:	No data available
Initial boiling point and boiling range	No data available
Flash point:	Not applicable due to aqueous formulation
Evaporation rate:	Not applicable
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	Not applicable
Vapor density:	Not applicable
Relative density:	1.155 @ 20° C (9.64 lbs/gal) @21º C
Solubility(ies):	Soluble in water
Partition coefficient: n-octanol/water:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	10.5 cPs @ 21º C

VOC Emission Potential(%): 17.7

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not Reactive
Chemical Stability: This material is stable under normal handling and storage conditions.
Possibility of Hazardous Reactions: Will not occur.
Conditions to Avoid: Excessive heat. Do not store near heat or flame.
Incompatible Materials: Strong oxidizing agents: bases and acids.
Hazardous Decomposition Products: Under fire conditions may produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eye contact, Skin contact
Symptoms of Exposure:
Eye Contact: Causes severe irritation.
Skin Contact: Causes slight irritation.
Ingestion: Harmful if ingested. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms.
Inhalation: Low toxicity if inhaled. May cause upper respiratory tract irritation.
Delayed, immediate and chronic effects of exposure: None reported.

Toxicological Data:
Except as noted, data from laboratory studies conducted on this product are summarized below:
Oral: Rat LD_{50}: 1,030 mg/kg (female) (estimated based on mortalities for doses tested)
Dermal: Rabbit LD_{50}: >5,000 mg/kg (data on similar product)
Inhalation: Rat 4-hr LC_{50}: >2.06 mg/L (no animals died at this dose)
Eye Irritation: Rabbit: Corrosive/severely irritating (data on similar product)
Skin Irritation: Rabbit: Slightly irritating (data on similar product)
Skin Sensitization: Guinea Pig: Not a contact sensitizer

Subchronic (Target Organ) Effects: Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry, and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods.
Carcinogenicity / Chronic Health Effects: Various animal cancer tests have shown no reliably positive association between 2,4-D exposure and cancer. Epidemiology studies on herbicide use have been both positive and negative with the majority being negative.
Reproductive Toxicity: No impairment of reproductive function attributable to 2,4-D has been noted in laboratory animal studies.
Developmental Toxicity: Studies in laboratory animals with 2,4-D have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals.
Genotoxicity: There have been some positive and some negative studies, but the weight of evidence is that 2,4-D is not mutagenic.
Assessment Carcinogenicity:
This product contains substances that are considered to be probable or suspected human carcinogens as follows:

	Regulatory Agency Listing As Carcinogen			
Component	**ACGIH**	**IARC**	**NTP**	**OSHA**
Chlorophenoxy Herbicides	No	2B	No	No
Other Ingredients	No	No	No	No

12. ECOLOGICAL INFORMATION

Ecotoxicity:
Data on 2,4-D Dimethylamine Salt:
96-hour LC_{50} Bluegill: 524 mg/l Bobwhite Quail Oral LD_{50}: 500 mg/kg

96-hour LC_{50} Rainbow Trout:	250 mg/l	Mallard Duck 8-day Dietary LC_{50}:	>5,620 ppm
48-hour EC_{50} Daphnia:	184 mg/l		

Environmental Fate:
In laboratory and field studies, 2,4-D DMA salt rapidly dissociated to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate ground water. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling and Disposal:
Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

DOT:

<25 gallons per completed package
Non Regulated

≥ 25 gallons per completed package
UN 3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D Salt), 9, III, RQ

IMDG:
Non Regulated

IATA:
Non Regulated

15. REGULATORY INFORMATION

EPA FIFRA INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER. Corrosive. Causes irreversible eye damage. Harmful if swallowed. Avoid breathing vapors or spray mist. Do not get in eyes, on skin, or on clothing.

U.S. FEDERAL REGULATIONS

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:
Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370.66):
Immediate and Delayed

Section 313 Toxic Chemical(s):
None Listed

Reportable Quantity (RQ) under U.S. CERCLA:
Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) 100 pounds

RCRA Waste Code:
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:
Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not Listed.

16. OTHER INFORMATION

National Fire Protection Association (NFPA) Hazard Rating:
Rating for this product: Health: 3 **Flammability:** 1 **Reactivity:** 0
Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter “Information”) are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

Date of Issue: May 6, 2020 **Supersedes:** June 21, 2016

Weedar is a registered trademark of Nufarm Americas Inc.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200

DRANO® MAX GEL ULTRA CLOG REMOVER

Version *1*.0 Print Date 03/06/2018

Revision Date 05/20/2015 SDS Number 350000021154

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **DRANO® MAX GEL ULTRA CLOG REMOVER**

Recommended use : Drain Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252

Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

Hazard classification	Hazard category	Hazards identification
Skin corrosion	Category 1	Causes severe skin burns and eye damage.
Serious eye damage	Category 1	Causes serious eye damage.

Labelling

Hazard symbols
Corrosion

Signal word
Danger

Hazard statements
Causes severe skin burns and eye damage.

Precautionary statements
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Immediately call a POISON CENTER or doctor/ physician.

Specific treatment (see supplemental first aid instructions on this label).
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/ container to an approved incineration plant.
Wear protective gloves.
Do not breathe dust or mist.
Wash hands thoroughly after handling.

Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight percent
Sodium hypochlorite	7681-52-9	5.00 - 10.00
Sodium chloride	7647-14-5	5.00 - 10.00
Sodium hydroxide	1310-73-2	1.00 - 5.00

The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Get medical attention immediately.

Skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/ physician.

Inhalation : IF INHALED: If breathing is difficult, remove victim to fresh air

and keep at rest in a position comfortable for breathing.

Ingestion : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during firefighting : Container may melt and leak in heat of fire.

Further information : Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear personal protective equipment.
Wash thoroughly after handling.

Environmental precautions : Outside of normal use, avoid release to the environment.

Methods and materials for containment and cleaning up : Dike large spills.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing.
For personal protection see section 8.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.
Avoid breathing vapours, mist or gas.
Wash thoroughly after handling.

Advice on protection : Normal measures for preventive fire protection.

against fire and explosion

Storage

Requirements for storage areas and containers : Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Sodium hydroxide	1310-73-2	2 mg/m3	-	-	OSHA TWA
Sodium hydroxide	1310-73-2	2 mg/m3	-	-	ACGIH Ceiling

Personal protective equipment

Respiratory protection : Substantial amounts of mist/vapors can be controlled with local exhaust ventilation or respiratory protection.

Hand protection : Rubber gloves

Eye protection : Wear splash-resistant Chemical goggles.

Skin and body protection : Protective footwear.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : gel

Color : natural colour

Odor : Bleach

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Odour Threshold	:	No data available
pH	:	11.5 - 13.5 at (25 °C)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	212 °C
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	No data available
Vapour pressure	:	No data available
Vapour density	:	No data available
Relative density	:	1.11 g/cm3 at 25 °C
Solubility(ies)	:	completely soluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available

Decomposition temperature	:	No data available
Viscosity, dynamic	:	1,200 mPa.s at 25 °C
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	0.1 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.
Conditions to avoid	:	Direct sources of heat.
Incompatible materials	:	Do not mix with bleach or any other household cleaners. Strong bases
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview	:	Danger
Acute oral toxicity	:	No data available

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Acute inhalation toxicity : No data available

Acute dermal toxicity : No data available

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	Oral
Acute toxicity	No classification proposed	Dermal
Acute toxicity	No classification proposed	Inhalation - Dust and Mist
Acute toxicity	No classification proposed	Inhalation - Vapour
Acute toxicity	No classification proposed	Inhalation - Gas
Skin corrosion	Category 1	-
Serious eye damage	Category 1	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc. may be more susceptible to irritating effects

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12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

Toxicity to fish

Components	End point	Species	Value	Exposure time
Sodium hypochlorite	semi-static test LC50	Oncorhynchus mykiss (rainbow trout)	0.03 - < 0.19 mg/l	96 h
	NOEC		0.01 - < 0.1 mg/l	28 d
Sodium chloride	flow-through test LC50	Lepomis macrochirus	5,840 mg/l	96 h
	NOEC	Pimephales promelas (fathead minnow)	252 mg/l	33 d
Sodium hydroxide	LC50	Fish	35 - 189 mg/l	96 h

Toxicity to aquatic invertebrates

Components	End point	Species	Value	Exposure time
Sodium hypochlorite	static test EC50	Daphnia magna (Water flea)	0.033 - 0.044 mg/l	48 h
Sodium chloride	static test	Daphnia magna (Water		48 h

	EC50	flea)	340.7 - 469.2 mg/l	
	NOEC	Daphnia pulex	314 mg/l	21 d
Sodium hydroxide	EC50	Daphnia magna (Water flea)	40.4 mg/l	48 h

Toxicity to aquatic plants

Components	End point	Species	Value	Exposure time
Sodium hypochlorite	EC50	Skeletonema costatum	0.095 mg/l	72 h
Sodium chloride	IC50	Algae	3,014 mg/l	72 h
Sodium hydroxide	No data available			

Persistence and degradability

Component	Biodegradation	Exposure time	Summary
Sodium hypochlorite	No data available		
Sodium chloride	No data available		
Sodium hydroxide	No data available		

Bioaccumulative potential

Component	Bioconcentration factor (BCF)	Partition Coefficient n-Octanol/water (log)
Sodium hypochlorite	No data available	-3.42
Sodium chloride	1.09 QSAR	0.54
Sodium hydroxide	0.89 estimated	-1.38

Mobility

Component	End point	Value
Sodium hypochlorite	No data available	
Sodium chloride	No data available	
Sodium hydroxide	No data available	

PBT and vPvB assessment

Component	Results
Sodium hypochlorite	Not fulfilling PBT and vPvB criteria
Sodium chloride	Not fulfilling PBT and vPvB criteria
Sodium hydroxide	Not fulfilling PBT and vPvB criteria

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

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	Land transport	Sea transport	Air transport
UN number	1760	1760	1760
UN proper shipping name	UN 1760, Corrosive Liquid n.o.s. (Sodium Hydroxide,Sodium Hypochlorite), 8, PG III,LTD QTY	UN 1760, Corrosive Liquid n.o.s. (Sodium Hydroxide,Sodium Hypochlorite), 8, PG III,LTD QTY	UN 1760, Corrosive Liquid n.o.s. (Sodium Hydroxide,Sodium Hypochlorite), 8, PG III,LTD QTY
Transport hazard class(es)	8	8	8
Packing group	III	III	III
Environmental hazards	-	-	-
Special precautions for user	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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16. OTHER INFORMATION

HMIS Ratings

Health	3
Flammability	0
Reactivity	0

NFPA Ratings

Health	3
Fire	0
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

Hoja de Datos de Seguridad

de acuerdo con la Norma de Comunicación de Peligros; 29 CFR 1910.1200

DRANO® MAX GEL ULTRA CLOG REMOVER

Versión *1*.0

Fecha de impresión 03/06/2018

Fecha de revisión 05/20/2015

Número SDS 350000021154

1. IDENTIFICACIÓN DEL PRODUCTO Y DE LA COMPAÑÍA

Información del Producto

Nombre del producto : **DRANO® MAX GEL ULTRA CLOG REMOVER**

Uso recomendado : Desatascador

Fabricante, importador, proveedor : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Teléfono : +18005585252

Teléfono de emergencia : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. IDENTIFICACIÓN DE LOS PELIGROS

Clasificación de la sustancia o de la mezcla

Sistema Globalmente Armonizado (SGA) Clasificación

Clasificación peligrosa	Categoría de peligro	Identificación de los peligros
Corrosión cutáneas	Categoría 1	Provoca quemaduras graves en la piel y lesiones oculares graves.
Lesiones oculares graves	Categoría 1	Provoca lesiones oculares graves.

Etiquetado

Símbolos de peligro
Corrosión

Palabra de advertencia
Peligro

Indicaciones de peligro
Provoca quemaduras graves en la piel y lesiones oculares graves.

Consejos de prudencia
Si se necesita consejo médico, tener a mano el envase o la etiqueta.

Mantener fuera del alcance de los niños.
Leer la etiqueta antes del uso.
Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA o a un médico.
Se necesita un tratamiento específico (ver las instrucciones suplementarias de primeros auxilios en esta etiqueta).
EN CASO DE INHALACIÓN: Transportar a la víctima al exterior y mantenerla en reposo en una posición confortable para respirar.
EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitarse inmediatamente las prendas contaminadas. Aclararse la piel con agua o ducharse.
EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.
EN CASO DE INGESTIÓN: Enjuagarse la boca. NO provocar el vómito.
Lavar las prendas contaminadas antes de volver a usarlas.
Guardar bajo llave.
Eliminar el contenido/ el recipiente en una planta de incineración autorizada.
Llevar guantes de protección.
No respirar el polvo o la niebla.
Lavarse las manos concienzudamente tras la manipulación.

Otros peligros : Ninguno identificado.

3. COMPOSICIÓN/INFORMACIÓN SOBRE LOS COMPONENTES

Nombre químico	No. CAS	Por ciento en peso
Hipoclorito de sodio	7681-52-9	5.00 - 10.00
Cloruro de sodio	7647-14-5	5.00 - 10.00
Hidróxido sódico	1310-73-2	1.00 - 5.00

La identidad química y porcentaje exacto (concentración) de esta composición han sido retenidos como secreto comercial.

Para información adicional sobre los ingredientes de este producto ver www.whatsinsidescjohnson.com.

4. PRIMEROS AUXILIOS

Contacto con los ojos : EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando. Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA o a un médico. Consultar inmediatamente un médico.

Contacto con la piel	:	EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ducharse. Lavar la ropa antes de reutilizarla. Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA o a un médico.
Inhalación	:	EN CASO DE INHALACIÓN: Si respira con dificultad, transportar a la víctima al exterior y mantenerla en reposo en una posición confortable para respirar.
Ingestión	:	EN CASO DE INGESTIÓN: Enjuagarse la boca. NO provocar el vómito.

5. MEDIDAS DE LUCHA CONTRA INCENDIOS

Medios de extinción apropiados	:	Usar agua pulverizada, espuma resistente al alcohol, polvo seco o dióxido de carbono.
Peligros específicos en la lucha contra incendios	:	El envase puede fundirse y rezumarse en el calor del fuego.
Otros datos	:	Llevar un ropa de protección completa y un aparato respiratorio autónomo con presión positiva. En caso de incencio y/o de explosión no respire los humos.

6. MEDIDAS EN CASO DE VERTIDO ACCIDENTAL

Precauciones personales	:	Llevar equipo de protección individual. Lavarse concienzudamente tras la manipulación.
Precauciones relativas al medio ambiente	:	Fuera del uso regular, evite desecharlo en el medio ambiente.
Métodos y material de contención y de limpieza	:	Contenga derrames grandes. Limpiar los residuos del lugar del derrame.

7. MANIPULACIÓN Y ALMACENAMIENTO

Manipulación

Precauciones para una manipulación segura : Evitar el contacto con la piel, ojos y ropa.
Equipo de protección individual, ver sección 8.
Úsese únicamente como se indica.
MANTENER EL PRODUCTO FUERA DEL ALCANCE DE NIÑOS Y MASCOTAS.
Evitar respirar los vapores, la neblina o el gas.
Lavarse concienzudamente tras la manipulación.

Indicaciones para la protección contra incendio y explosión : Disposiciones normales de protección preventivas de incendio.

Almacenamiento

Exigencias técnicas para almacenes y recipientes : Guardar bajo llave.

8. CONTROLES DE EXPOSICIÓN/ PROTECCIÓN INDIVIDUAL

Límites de exposición profesional

Componentes	No. CAS	mg/m3	ppm	Non-standard units	Base
Hidróxido sódico	1310-73-2	2 mg/m3	-	-	OSHA TWA
Hidróxido sódico	1310-73-2	2 mg/m3	-	-	ACGIH Ceiling

Protección personal

Protección respiratoria : Las cantidades importantes de neblinas/vapores pueden controlarse con ventilación de descarga local o protección respiratoria.

Protección de las manos : Guantes de goma

Protección de los ojos : Usar anteojos de seguridad resistentes a salpicaduras químicas.

Protección de la piel y del cuerpo : Calzado protector.

Medidas de higiene	:	Manipular con las precauciones de higiene industrial adecuadas, y respetar las prácticas de seguridad. Lavar a fondo después de la manipulación.

9. PROPIEDADES FÍSICAS Y QUÍMICAS

Forma	:	gel
Color	:	color natural
Olor	:	Blanqueo
Umbral olfativo	:	Sin datos disponibles
pH	:	11.5 - 13.5 a (25 °C)
Punto de fusión/ punto de congelación	:	Sin datos disponibles
Punto inicial de ebullición e intervalo de ebullición	:	212 °C
Punto de inflamación	:	no se inflama
Tasa de evaporación	:	Sin datos disponibles
Inflamabilidad (sólido, gas)	:	Sin datos disponibles
Inflamabilidad superior/inferior o límites explosivos	:	Sin datos disponibles
Presión de vapor	:	Sin datos disponibles

Densidad de vapor	:	Sin datos disponibles
Densidad relativa	:	1.11 g/cm3 a 25 °C
Solubilidad(es)	:	totalmente soluble
Coeficiente de reparto n-octanol/agua	:	Sin datos disponibles
Temperatura de auto-inflamación	:	Sin datos disponibles
Temperatura de descomposición	:	Sin datos disponibles
Viscosidad, dinámica	:	1,200 mPa.s a 25 °C
Viscosidad, cinemática	:	Sin datos disponibles
Propiedades comburentes	:	Sin datos disponibles
Compuestos Orgánicos Volátiles COV total (% peso)*	:	0.1 % - excepciones adicionales pudieran aplicar *como lo definido por la federacion de US relacionado con regulaciones de productos de consumo
Otra información	:	Ninguno identificado. :

10. ESTABILIDAD Y REACTIVIDAD

Posibilidad de reacciones peligrosas	:	Si ocurre una mezcla accidental y se forma el gas tóxico, área de salida inmediatamente. No vuelva hasta que esta' bien ventilada.

Condiciones que deben evitarse : Fuentes directas de calor.

Materiales incompatibles : No mezclar con lejia o cualquier otro producto de limpieza.
Bases fuertes

Productos de descomposición peligrosos : La descomposición térmica puede llegar a desprender gases y vapores irritativos.

11. INFORMACIÓN TOXICOLÓGICA

Revisión de la Emergencia : Peligro

Toxicidad oral aguda : Sin datos disponibles
Toxicidad aguda por inhalación : Sin datos disponibles

Toxicidad cutánea aguda : Sin datos disponibles

GHS propiedades	Clasificación	Las vías de entrada
Toxicidad aguda	Ninguna clasificación propuesta	Oral
Toxicidad aguda	Ninguna clasificación propuesta	Cutáneo
Toxicidad aguda	Ninguna clasificación propuesta	Inhalación - El polvo y la niebla
Toxicidad aguda	Ninguna clasificación propuesta	Inhalación - vapor
Toxicidad aguda	Ninguna clasificación propuesta	Inhalación – Gas
Corrosión cutáneas	Categoría 1	-
Lesiones oculares graves	Categoría 1	-
Sensibilización cutánea	Ninguna clasificación	-

	propuesta	
Sensibilización respiratoria	Ninguna clasificación propuesta	-
Mutagenicidad en células germinales	Ninguna clasificación propuesta	-
Carcinogenicidad	Ninguna clasificación propuesta	-
Toxicidad para la reproducción	Ninguna clasificación propuesta	-
Toxicidad específica en determinados órganos - exposición única	Ninguna clasificación propuesta	-
Toxicidad específica en determinados órganos - exposiciones repetidas	Ninguna clasificación propuesta	-
Peligro de aspiración	Ninguna clasificación propuesta	-

Condición Médica Agravada : Individuos con desordenes crónicos del sistema respiratorio como asma, bronquitis crónica, enfisema, etc., pueden ser más susceptibles a los efectos irritantes.

12. INFORMACIÓN ECOLÓGICA

Producto : El producto en sí no ha sido probado.

Toxicidad
Los ingredientes de esta fórmula han sido revisados y ningún impacto adverso se espera cuando usado conforme a las instrucciones de etiqueta.
Toxicidad para los peces

Componentes	**Punto final**	**Especies**	**Valor**	**Tiempo de exposición**
Hipoclorito de sodio	Casi estático	Oncorhynchus mykiss (Trucha irisada)	0.03 - < 0.19 mg/l	96 h

	prueba CL50 NOEC		 0.01 - < 0.1 mg/l	 28 d
Cloruro de sodio	Prueba de fluir a través de CL50 NOEC	Lepomis macrochirus Pimephales promelas (Piscardo de cabeza gorda)	5,840 mg/l 252 mg/l	96 h 33 d
Hidróxido sódico	CL50	Pez	35 - 189 mg/l	96 h

Toxicidad para los invertebrados acuáticos

Componentes	**Punto final**	**Especies**	**Valor**	**Tiempo de exposición**
Hipoclorito de sodio	Estático prueba CE50	Daphnia magna (Pulga de mar grande)	0.033 - 0.044 mg/l	48 h
Cloruro de sodio	Estático prueba CE50 NOEC	Daphnia magna (Pulga de mar grande) Daphnia pulex	340.7 - 469.2 mg/l 314 mg/l	48 h 21 d
Hidróxido sódico	CE50	Daphnia magna (Pulga de	40.4 mg/l	48 h

		mar grande)		

Toxicidad para las plantas acuáticas

Componentes	Punto final	Especies	Valor	Tiempo de exposición
Hipoclorito de sodio	CE50	Skeletonema costatum	0.095 mg/l	72 h
Cloruro de sodio	CI50	Algas	3,014 mg/l	72 h
Hidróxido sódico	Sin datos disponibles			

Persistencia y degradabilidad

Componente	Biodegradación	Tiempo de exposición	Resumen
Hipoclorito de sodio	Sin datos disponibles		
Cloruro de sodio	Sin datos disponibles		
Hidróxido sódico	Sin datos disponibles		

Potencial de bioacumulación

Componente	Factor de bioconcentración (FBC)	Coeficiente de Partición n-Octanol/Agua (log)
Hipoclorito de sodio	Sin datos disponibles	-3.42
Cloruro de sodio	1.09 QSAR	0.54
Hidróxido sódico	0.89 estimado	-1.38

Movilidad

Componente	Punto final	Valor
Hipoclorito de sodio	Sin datos disponibles	
Cloruro de sodio	Sin datos disponibles	
Hidróxido sódico	Sin datos disponibles	

Valoración PBT y MPMB

Componente	Resultados
Hipoclorito de sodio	A la vista de los datos disponibles no se cumplen los criterios PBT y vPvB
Cloruro de sodio	A la vista de los datos disponibles no se cumplen los criterios PBT y vPvB
Hidróxido sódico	A la vista de los datos disponibles no se cumplen los criterios PBT y vPvB

Otros efectos adversos : Ninguna conocida.

13. CONSIDERACIONES RELATIVAS A LA ELIMINACIÓN

Consumidor puede desechar el envase vacío en la basura, o recíclela donde existen las instalaciones.

14. INFORMACIÓN RELATIVA AL TRANSPORTE

Favor de referirse al conocimiento de embarque/los documentos de recibo para información actualizada sobre envíos.

	Transporte por carretera	**Transporte marítimo**	**Transporte aéreo**
Número ONU	1760	1760	1760
Designación oficial de transporte de las Naciones Unidas	UN 1760, Corrosive Liquid n.o.s. (Sodium Hydroxide,Sodium Hypochlorite), 8, PG III,LTD QTY	UN 1760, Corrosive Liquid n.o.s. (Sodium Hydroxide,Sodium Hypochlorite), 8, PG III,LTD QTY	UN 1760, Corrosive Liquid n.o.s. (Sodium Hydroxide,Sodium Hypochlorite), 8, PG III,LTD QTY
Clase(s) de peligro para el transporte	8	8	8
Grupo de embalaje	III	III	III
Peligros para el medio ambiente	-	-	-
Precauciones particulares para los usuarios	Una derogación para cantidades limitadas puede ser aplicable a este producto, por favor consulte los documentos de transporte.	Una derogación para cantidades limitadas puede ser aplicable a este producto, por favor consulte los documentos de transporte.	Una derogación para cantidades limitadas puede ser aplicable a este producto, por favor consulte los documentos de transporte.

15. INFORMACIÓN REGLAMENTARIA

Estatuto de notificación : Todos los componentes de este producto están indicados o están excluidos de la obligación de estar indicados en el Inventario previsto por la Ley de control de sustancias tóxicas (TSCA) de los EE.UU.

Estatuto de notificación : Todos los ingredientes de este producto cumplen con los requisitos de la Notificación de Sustancias Nuevas de la Ley Canadiense de Protección Ambiental (CEPA).

Prop. 65 de California : Este producto no contiene ninguna sustancia química conocida para el de Estado de California que pueden causar cáncer, defectos de nacimiento, o cualquier otro daño reproductivo.

DRANO® MAX GEL ULTRA CLOG REMOVER

Versión *1*.0

Fecha de impresión 03/06/2018

Fecha de revisión 05/20/2015

Número SDS 350000021154

16. OTRA INFORMACIÓN

HMIS Ratings

Salud	3
Inflamabilidad	0
Reactividad	0

Códigos de NFPA

Salud	3
Fuego	0
Reactividad	0
Especial	-

Esta información se proporciona según Occupational Safety y Health Administration (OSHA) (29 CFR 1910.1200). La información suministrada está diseñada para lugares de trabajo donde uso del producto y la frecuencia de exposición excede lo establecido para el etiquetado de consumo.

Otros datos

este producto ha sido elaborado, usando fuentes técnicas confiables sin constituir una garantía implicada en cuanto a la exatitud de la información adjunta. El usuario es responsable de revisar toda la información disponible cuando use el producto.

Preparado por	Evaluación de Seguridad y Asuntos Regulatorios Globales de SC Johnson (GSARA)

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name: Type FD™
Electrical Contact Cleaner Aerosol

Product ID numbers: FD-9, FD-9M

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Electrical Cleaner/Degreaser

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Flam Aerosol 1	H222, H229
Skin Irrit. 2	H315
STOT SE 3	H336
Rep. Tox. 2	H361

2.2 Label elements

This product is intended for consumer use and is labeled according to CPSC guidelines and not to GHS guidelines listed below. It is safe for consumers and other users under normal and reasonably foreseeable use. The SDS contains valuable information for industrial workplace conditions.

Contains: Isohexanes, Ethanol, n-Pentane, n-Hexane, Isopropanol, Carbon Dioxide

Pictograms:

Signal word: Danger

Hazard Statements:

H222	Extremely flammable aerosol.
H229	Pressurized container: May burst if heated.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child

Precautionary Statements:

P210	Keep away from sparks, flames and hot surfaces. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear protective gloves.
P261	Avoid breathing vapor.
P271	Use only outdoors or in a well-ventilated area.
P303 + P361 + P353	IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water.
P332 + P313	If skin irritation occurs: Get medical attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	If exposed or concerned: Get medical advice.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501	Dispose of contents/container in accordance with local and national regulations.
Notes:	Aspiration classification not applied due to the physical form of the product.

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

Component	CAS #	EC #	Wt. %
Isohexanes	107-83-5	203-523-4	80 -95%
Ethanol	64-17-5	200-578-6	<15%
n-Pentane	109-66-0	203-692-4	<3%
n-Hexane	110-54-3	203-777-6	<3%
Isopropanol	67-63-0	200-661-7	<2%
Carbon Dioxide	124-38-9	204-6969-9	<8%

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: If eye irritation from exposure to vapors develops, move to fresh air. Flush eyes with clean water. If irritation persists, seek medical attention. For direct eye contact, flush with large quantity of water for 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.

Inhalation (Breathing): If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.

Ingestion (Swallowing): Do not induce vomiting or give anything by mouth unless directed to do so by medical personnel. Get medical attention if symptoms appear.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

Aspiration hazard. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. This route not expected in aerosol package.

5. Firefighting Measures

5.1 Extinguishing media:

Carbon dioxide, water fog, dry chemical or foam.

5.2 Special hazards arising from the substance or mixture

Flammable aerosol product. Vapors may travel considerable distance to source of ignition and flash back. May burn with nearly invisible flame.

Hazardous decomposition and by-products:

Burning generates carbon monoxide, carbon dioxide.

5.3 Advice for firefighters

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Use water spray to cool fire exposed containers. Aerosol cans can build up pressure and explode when exposed to temperatures greater than 120°F (49°C).

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. For a spill in a confined space, provide mechanical ventilation to disperse or exhaust vapors. For emergency responders: use respiratory protection: half-face or full-face respirator with filter(s) for organic vapor for spills in a confined space. Chemical goggles are recommended if splashes or contact with eyes is possible. For small spills: normal antistatic work clothes are usually adequate.

6.2 Environmental precautions:

Avoid release to the environment. Dyke the spill to prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods materials for containment and cleaning up:

Absorb spill with sand or absorbents. Collect as much of the spilled material as possible using non-sparking tools and transfer to a container. Seal the container. Remember, adding an absorbent material does not change the toxicity or flammability hazard.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Extremely flammable aerosol. Keep containers cool, dry, and away from sources of ignition. Do not expose container to direct sunlight or temperatures above 50°C/122°F. Do not transport or store near heat sources. No smoking. Avoid breathing vapors or spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use only outdoors or in a well-ventilated area. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Do not transport or store near heat sources. Keep cans dry and away from sources of ignition. Do not puncture or incinerate container. Store this product with adequate ventilation.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Isohexane (107-83-5)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
USA, ACGIH	500 ppm	1000 ppm
USA, NIOSH TWA	100 ppm, 350 mg/m^3	510 ppm, 1800 mg/m^3
Alberta	1760 mg/m^3, 500 ppm	3500 mg/m^3, 1000 ppm

Quebec	1760 mg/m^3, 500 ppm	3500 mg/m^3, 1000 ppm
Saskatchewan*	500 ppm	1000 ppm

Ethanol (64-17-5)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
USA, OSHA NIOSH	1900 mg/m^3, 1000 ppm	--
USA, ACGIH	1881 mg/m^3, 1000 ppm	--
Alberta	1880 mg/m^3, 1000 ppm	--
Ontario	--	1000 ppm
Quebec	1880 mg/m^3, 1000 ppm	--
Saskatchewan*	1000 ppm	1250 ppm

n-Pentane (109-66-0)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
USA, OSHA NIOSH	1000 ppm	
British Columbia		
Alberta	600 ppm, 1700 mg/m^3	--
Ontario	600 ppm	--
Quebec	120 ppm, 350 mg/m^3	--
Saskatchewan	600 ppm	750 ppm

n-Hexane (110-54-3)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
USA, OSHA, NIOSH	180 mg/m^3, 50 ppm	
USA, ACGIH	50 ppm	
British Columbia	200 ppm	400 ppm
Alberta	176 mg/m^3, 50 ppm	--
Ontario (skin)	50 ppm	--
Quebec	176 mg/m^3, 50 ppm	--
Saskatchewan (skin)	50 ppm	62.5 ppm

Isopropanol, 2-propanol (67-63-0)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
USA, OSHA NIOSH	980 mg/m^3, 400 ppm	1,225 mg/m^3, 500 ppm
USA, ACGIH	200 ppm	400 ppm
British Columbia	200 ppm	400 ppm
Alberta	492 mg/m^3, 200 ppm	984 mg/m^3, 400 ppm
Ontario	200 ppm	400 ppm
Quebec	985 mg/m^3, 400 ppm	1,230 mg/m^3, 500 ppm
Saskatchewan*	200 ppm	400 ppm

** Manitoba, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island are all based on the current ACGIH TLVs. New Brunswick is based on an older version ACGIH. Nunavet and Northwest Territories are based heavily on current ACGIH TLVs.*

8.2 Exposure controls

Respiratory protection:

Normal ventilation is adequate. If exposure exceeds recommended limits, respirator protection is recommended. Use a respirator or gas mask with cartridges for organic vapors (NIOSH-approved) or use supplied air equipment.

Protective gloves:
For repeated or prolonged skin contact, the use of impermeable gloves is recommended to prevent drying and possible irritation.

Eye protection:

Safety glasses recommended.

Other protective equipment:
It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. Physical and Chemical

9.1 Information of basic physical and chemical properties (bulk liquid)

Appearance:	Clear, colorless liquid; mild odor.
Odor threshold:	Not available
pH:	Does not apply
Freezing point:	Not available
Boiling point:	144°F / 62°C
Flash point:	>0°F / -18°C (TCC)
Evaporation rate:	1.7 (n-butyl acetate = 1)
Flammability (solid, gas):	Not applicable to liquids
Flammability limits:	**LEL:** 1.2%
Vapor pressure:	Not available
Vapor density (Air = 1):	>1(Air = 1)
Specific gravity (H_2O = 1):	0.67
Solubility in water:	Not available
Coefficient of Water/Oil Distribution:	Not available
Auto-ignition temperature:	750.2°F / 399°C
Decomposition temperature:	Not available
Viscosity:	Not available

9.2 Other Information

Volatiles (Weight %):	100%
VOC Content:	670 g/l

10. Stability and Reactivity

10.1 Reactivity:

See remaining headings in Section 10.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

None known.

10.4 Conditions to avoid:

Avoid heat, flame, and sparks.

10.5 Incompatible materials :

Strong oxidizing agents.

10.6 Hazardous decomposition products:

Carbon dioxide, carbon monoxide.

11. Toxicological Information

11.1 Information on toxicological effects:
Acute toxicity

Eye contact:

Direct eye contact may cause eye irritation. This irritation is minimal and expected to be transient.

Skin contact:
Prolonged or repeated skin exposure can remove oils, causing redness, drying and cracking. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material.

Irritation and Sensitization Potential:

Product may be irritating to skin and eyes. It is not a sensitizer.

Inhalation (Breathing):
Concentrated solvent vapors may cause irritation of the nose and throat. Prolonged exposure to excessively high vapor concentrations can result in central nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).

Ingestion:

Ingestion of large quantities may cause irritation of the digestive tract, nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).

Toxicity to Animals:

Ethanol	LD_{50} (oral rat) 9000 mg/kg
	Draize test, rabbit eye 500 mg/24 hours Mild
	LC_{50} (inhl rat) 20000, 10 hours
n-Pentane	LC_{50} (inhl rat) 364000 mg/m^3, 4 hours
n-Hexane	LD_{50} (oral rat) 25000 mg/kg
	LC_{50} (inhl rat) 48000, 4 hours
Isopropanol	LD_{50} (oral rat) 5000 mg/kg
	LD_{50} (dermal rabbit) 12800 mg/kg
	LC_{50} (inhl rat) 12000, 8 hours

Chronic Exposure:

Reproductive Toxicity:	No data available.
Mutagenicity:	No data available
Teratogenicity:	No data available
Specific Target Organ Toxicity (STOT)	No end point data.
Toxicologically Synergistic Products:	Not available.
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components. ACGIH classifies a component, n-hexane as Class A4, not classifiable for human or animal and IARC classifies it as Class 3, not classifiable for human.

12. Ecological Information

12.1 Toxicity:

Ecotoxicity:	No information available.
Aquatic Toxicity:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
n-Hexane	96 h LC_{50} Fathead Minnow (fish) 2.5 mg/l
	48 h EC_{50} Daphnia magna (water flea) 3,878 mg/l
	3 h EC_{50} Fresh water algae 12,840 mg/l
Isopropanol	96 h LC_{50} Fathead Minnow (fish)> 1000 µl/l
	48 h LC_{50} Golden Orfe 8970 - 9280 mg/l
	96 h LC_{50} Daphnid (crustacean)> 1000 µl/l

12.2 Persistence and degradability:	No information available
12.3 Bioaccumulation potential:	No information available
12.4 Mobility in soil:	No information available
12.5 Results of PBT and vPvB Assessment:	This product is not, nor does it contain a substance that is a PBT or vPvB.
12.6 Other adverse effects:	None known.

13. Disposal Considerations

Dispose of product in accordance with National and Local Regulations.

14. Transport Information

UN Number:	1950
UN Proper shipping name:	AEROSOLS, Flammable, less than 1 liter each, Class 2.1, LTD QTY
Transport hazard class(es):	Class 9
Packing group:	Not Applicable
Environmental hazards:	None known
Special precautions:	None known
TDG:	Not Regulated
ICAO/IATA-DGR:	Consumer Commodity, ID 8000, Class 9, LTD QTY
IMDG:	UN 1950, AEROSOLS, Flammable, less than 1 liter each, Class 2.1, LTD QTY

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

USA Federal and State
All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting	**Acute**	**Chronic**	**Fire**	**Pressure**	**Reactive**
	Yes	No	Yes	No	No

	CERCLA/SARA Sec 302		**SARA Sec. 313**
Components	**Hazardous Substance RQ**	**EHS TPQ**	**Toxic Release**
n-Hexane	Yes (5000 lbs.)	No	Yes (1%)

NFPA Ratings:	Health:	1
	Fire:	3
	Reactivity:	0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

California Proposition 65
WARNING: This product can expose you to chemicals including n-hexane which is known to the state of California to cause birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov.

European Union
Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list ≥ 0.1% SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Canada
All components are listed on the DSL inventory.
This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

Australia
All components are listed on the AICS.
Hazardous according to criteria of NOHSC Australia.

15.2 Chemical Safety Assessment
No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:
OSHA = Occupational Safety and Health Administration
CLP = Classification, Labeling and Packaging Regulation
STOT = Specific Target Organ Toxicity
LD_{50} = Median Lethal Dose
DNEL = Derived No Effect Level
ACGIH = American Conference of Governmental Industrial Hygienists
TSCA = Toxic Substances Control Act (USA)
DSL = Domestic Substances List (Canada)
AICS = Australian Inventory of Chemical Substances

Revision Date:	September 21, 2018
Revision Number:	9
Supersedes:	September 15, 2017
Other:	Not Applicable
Indication of Changes:	Section 3, 15 updated; format updates and additional California Proposition 65 information. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE AND PREPARATION

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
P.O. Box 53
Stillwater, MN 55082 USA
Phone: 1-651-430-2270
Fax: 1-651-430-3634

Polywater Europe BV
Mauritsplaat 126
NL-3012CD Rotterdam
Netherlands
Tel: +31 10 233 0578

Emergency Number: +1-651-430-2270

Product Name: Type HP™
Cleaner/Degreaser Aerosol
(HPY-12)

Chemical Description: Hydrocarbon/Terpene Blend

Product Use: Cleaning Preparation in Aerosol Package

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	EC #	Wt %
Medium Aliphatic Petroleum Solvent	64742-47-8	265-149-8	< 100
Citrus Terpenes	94266-47-4	304-454-3	< 25
Carbon Dioxide	124-38-9	204-696-9	< 5

3. HAZARDS IDENTIFICATION

Emergency Overview: Combustible. Keep away from fire and flame. Use with adequate ventilation. Do not ingest. May cause skin irritation. Avoid contact with skin. In case of eye contact, flush eyes with water. Keep out of reach of children.

Eye Contact: Direct eye contact with vapors or atomized particles may cause eye irritation. This irritation is minimal and expected to be transient.

Skin Contact: Prolonged or repeated skin exposure can remove oils, causing redness, drying and cracking. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material.

Irritation and Sensitization Potential: Product may be irritating to skin and eyes. It is not a sensitizer.

Inhalation (Breathing): Concentrated petroleum solvent vapors may cause irritation of the nose and throat. Prolonged exposure to excessively high vapor concentrations can result in central nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue). Persons with impaired lung function may experience additional breathing difficulties due to the irritant properties of this material.

Ingestion (Swallowing): Ingestion of large quantities may cause irritation of the digestive tract and nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).

4. FIRST AID MEASURES

Eye Contact:	If eye irritation from exposure to vapors develops, move to fresh air. Flush eyes with clean water. If irritation persists, seek medical attention. For direct eye contact, flush with large quantity of water for 15 minutes. Seek medical attention.
Skin Contact:	Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.
Inhalation (Breathing):	If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.
Ingestion (Swallowing):	Do not induce vomiting or give anything by mouth. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention.

5. FIRE-FIGHTING MEASURES

Flash Point:	> 60.5°C (PMCC)
Flammable Limits:	LEL = 0.7% UEL = 6.1%-7.0%
Autoignition Temperature:	Not Available
Hazardous Decomposition and By-Products:	Burning generates CO, CO_2 and smoke. Smoke may be acrid and fumes irritating.
Extinguishing Media:	Carbon Dioxide, Dry Chemical or Foam
Special Precautions:	Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Use water mist to cool fire-exposed containers. Avoid direct streams of water, as fire scattering may occur.
Unusual Hazards:	Aerosol cans can build up pressure and explode when exposed to temperatures greater than 120°F. Cool containers with water.

6. ACCIDENTAL RELEASE MEASURES

Spills or leaks are unlikely with aerosol can. For small spills, absorb with sand or absorbents. For large spills, stay upwind and away from spill. Keep all sources of ignition away from spill. If spill is indoors, ventilate area of spill. Foam, especially high expansion foam, may be used to suppress vapors. Keep out of drains, sewers or waterways. Use sand or other inert material to dam and contain spill. Do not flush area with water.

7. HANDLING AND STORAGE

Do not expose container to direct sunlight or temperatures above 120°F. Do not transport or store near heat sources. Keep cans dry and away from sources of ignition. Do not puncture or incinerate container. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practice. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Normal ventilation is adequate. If exposure exceeds recommended limits, respirator protection is recommended. Use a respirator or gas mask with cartridges for organic vapors (NIOSH-approved) or use supplied air equipment.

Protective Gloves: For repeated or prolonged skin contact, the use of impermeable gloves is recommended to prevent drying and possible irritation.

Eye Protection: Eye protection is recommended, especially if the material is used in ways where it could spray or mist into the eyes.

Other Protective Equipment: It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Exposure Limits and Recommendations:

Chemical Component	OSHA PEL	ACGIH TLV

500 ppm TLV is suggested by the manufacturer for Type HP™ Solvent. TLV values for components have not been determined by OSHA/ACGIH.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid with a very light citrus scent.

Odor Threshold: Not Available

Vapor Density (Air = 1): Not Available

Specific Gravity (H_2O = 1): 0.79

Solubility in Water: Nil

Boiling Point: 185°C (initial)

Freezing Point: < -50°C

Evaporation Rate: < 0.1 (n-butyl acetate = 1)

Vapor Pressure: <1 mm Hg @ 20°C

Coefficient of Water/Oil Distribution: Not Available

pH: Not Applicable

Volatiles (Weight %): 100%

VOC Content: 790 g/l

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Avoid heat, flame, sources of ignition.

Materials to Avoid:	Strong oxidizing agents.
Hazardous Decomposition Products:	Carbon dioxide, carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Toxicity to Animals:	Medium Aliphatic Petroleum Solvent	LD_{50} (oral rat) >5000 mg/kg LD_{50} (dermal rabbit) >2000 mg/kg LC_{50} (inhl rat) >4.3mg/L, 4 hours
	Citrus Terpenes	LD_{50} (oral rat) >5000 mg/kg LD_{50} (dermal rabbit) 5000 mg/kg RD_{50} 1000 ppm
Chronic Exposure:	Not Available	
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.	
Reproductive Toxicity:	Not Available	
Mutagenicity:	Not Available	
Teratogencity:	Not Available	
Toxicologically Synergistic Products:	Not Available	

12. ECOLOGICAL INFORMATION

Mobility:	No information available.
Biodegradability:	Expected to be biodegradable.
Ecotoxicity:	No information available.
Aquatic Toxicity:	May cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with National and Local Regulations.

14. TRANSPORTATION INFORMATION

US DOT Domestic Ground Transportation:	Consumer Commodity, ORM-D
UN Proper Shipping Name:	Consumer Commodity
Class and Subsidiary Risk:	Class 9
Packing Group:	Not Applicable
TDG:	Not Regulated
ICAO/IATA-DGR:	Consumer Commodity, ORM-D-AIR, ID 8000, Class 9

IMDG:	UN 1950, AEROSOLS, Flammable, less than 1 liter each, Class 2.1, LTD QTY

15. REGULATORY INFORMATION

USA Federal and State

All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting	**Acute**	**Chronic**	**Fire**	**Pressure**	**Reactive**
	No	No	Yes	No	No

Components	**CERCLA/SARA Sec 302 Hazardous Substance RQ**	**EHS TPQ**	**SARA Sec. 313 Toxic Release**

Components are not affected by these Superfund regulations.

European Union

Product is classified as hazardous according to European Directives 88/379/EEC and 67/548/EEC and EU Regulation (EC) No 1272/2008.

Risk Phrases:	R65: Harmful: may cause lung damage if swallowed
Safety Phrases:	S2: Keep out of the reach of children S23: Do not breathe vapor S24: Avoid contact with skin S62: If swallowed, do not induce vomiting: seek medical advice immediately
Symbol:	Xn: Harmful

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. It does not contain Substances of Very High Concern (SVHC).

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Classification:	B3
Canadian DSL:	All ingredients listed.

Australia

All components are listed on the AICS.
Hazardous according to criteria of NOHSC Australia. Product classified as harmful (Xn).

Contact Information:	ADAPT Australia Pty. Ltd. 11 - 19 Global Drive Tullamarine Victoria 3043 Telephone Number. 03 9330 0666 Emergency Telephone Number: 0421 277 889

16. OTHER INFORMATION

NFPA Ratings:	Health:	1
	Fire:	2
	Reactivity:	0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

Revision Date: May 21, 2010
Revision Number: 1
Reviewed By: S. H. Dahlke

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

HPY:MSDS

Procter&Gamble Professional®

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	**Dawn Heavy Duty Degreaser - Ready to use**
Product Code	15154367
Version #	04
Revision date	11-01-2010
Manufacturer Address	Procter & Gamble Professional 2 P&G Plaza Cincinnati Ohio 45202 US
P&G Telephone Number:	1-800-332-7787
Emergency 24-hr Telephone #:	CHEMTREC 1-800-424-9300

2. Hazards Identification

Potential health effects

Routes of exposure	Ingestion. Inhalation. Skin contact. Eye contact.
Eyes	Health injuries are not known or expected under normal use. Accidental exposure will cause a mild but transient irritation.
Skin	Health injuries are not known or expected under normal use. May cause transient irritation. Skin contact may aggravate an existing dermatitis.
Inhalation	Health injuries are not known or expected under normal use. May cause irritation to the mucous membranes and upper respiratory tract.
Ingestion	Health injuries are not known or expected under normal use. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential environmental effects	Considering the limited amount applied during use and the size of the container, the risk of adverse effects is considered small.

3. Composition / Information on Ingredients

Components	CAS #	Percent
LIALKYL BENZENE SULFONATE	68081-81-2	1-5
SODIUM CARBONATE	497-19-8	1-5
2-AMINOETHANOL	141-43-5	0.1-1

4. First Aid Measures

First aid procedures

Eye contact	After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.
Skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air.
Ingestion	Drink 1 or 2 glasses of water. If ingestion of a large amount does occur, call a poison control center immediately.

5. Fire Fighting Measures

Environmental precautions Prevent further leakage or spillage if safe to do so.

Extinguishing media

Suitable extinguishing media Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Protection of firefighters

Protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Wear suitable protective clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so.

Clean-up methods and materials and containment measures In case of spills, beware of slippery floors and surfaces. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

7. Handling and Storage

Handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of reach of children.

Storage Store in a cool and well-ventilated place. Keep from freezing.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
2-AMINOETHANOL (141-43-5)	STEL	6 ppm
	TWA	3 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-AMINOETHANOL (141-43-5)	PEL	3 ppm
		6 mg/m3

Engineering controls Provide adequate ventilation.

Personal protective equipment

Eye / face protection Not normally needed.

Skin protection Not normally needed. For prolonged or repeated skin contact use suitable protective gloves. Recommended gloves include rubber or neoprene.

Respiratory protection Not normally needed.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Color Light purple

Odor Scented

Odor threshold Not available.

Physical state Liquid.

pH 10.4

Melting point Not available.

Freezing point Not available.

Boiling point Not available.

Flash point 213.8 °F (101.195 °C) estimated

Evaporation rate Not available.

Vapor pressure Not available.

Specific gravity 1.12

Solubility (water) Complete

Partition coefficient (n-octanol/water)	Not available
VOC	9.9 % estimated
Percent volatile	80.3 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	This is a stable material.
Conditions to avoid	None.
Hazardous decomposition products	No hazardous decomposition products are known.
Hazardous polymerization	Will not occur.

11. Toxicological Information

Toxicological data

Components	Test Results
2-AMINOETHANOL (141-43-5)	Acute Dermal LD50 Rabbit: 1025 mg/kg Acute Oral LD50 Guinea pig: 620 mg/kg Acute Oral LD50 Mouse: 700 mg/kg Acute Oral LD50 Rat: 10.2 g/kg Acute Other LD50 Mouse: 50 mg/kg Acute Other LD50 Rat: 67 mg/kg
SODIUM CARBONATE (497-19-8)	Acute Inhalation LC50 Guinea pig: 0.8 mg/l 2.00 Hours Acute Inhalation LC50 Mouse: 1.2 mg/l 2.00 Hours Acute Inhalation LC50 Rat: 2.3 mg/l 2.00 Hours Acute Oral LD50 Rat: 4090 mg/kg Acute Other LD50 Mouse: 116.6 mg/kg 30.00 Days
LIALKYL BENZENE SULFONATE (68081-81-2)	Acute Oral LD50 Rat: 0.7 - 1.3 g/kg

Sensitization	Not available.
Chronic effects	Not available.
Skin corrosion/irritation	Not available.

12. Ecological Information

Environmental effects Based on ecotoxicity and fate data for the individual ingredients in this specific formulation, and for related consumer household cleaning products formulations, this product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment at relevant environmental concentrations. This product is intended for dispersive use and should not be disposed of directly into the environment.

13. Disposal Considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

14. Transport Information

DOT

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance

No

Section 311 hazardous chemical

No

State regulations

ILLRTK

Contains no Illinois Right To Know toxic substances.

US - Connecticut Hazardous Material Survey: Listed substance

2-AMINOETHANOL (CAS 141-43-5) LISTED

US - Massachusetts RTK - Substance: Listed substance

Contains no Massachusetts Right To Know substances.

US - New Jersey RTK - Special Hazard: Listed substance

2-AMINOETHANOL (CAS 141-43-5) SPEC_HAZAROUS

US - New Jersey RTK - Substances: Listed substance

2-AMINOETHANOL (CAS 141-43-5) LISTED

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-AMINOETHANOL (CAS 141-43-5) LISTED

US - Rhode Island RTK - Hazardous Substances: Listed substance

2-AMINOETHANOL (CAS 141-43-5) LISTED

Canadian regulations

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Inventory Status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

HMIS® ratings

Health: 2
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 1
Instability: 0

Disclaimer

This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

Procter & Gamble
Fabric & Home Care Division
Ivorydale Technical Center
5299 Spring Grove Avenue
Cincinnati, OH 45217-1087

MATERIAL SAFETY DATA SHEET

MSDS: FH/C/2004/TWTG-677TFH — Issue Date: November 3, 2005
Supersedes: N/A — Issue Date: N/A

SECTION I - CHEMICAL PRODUCT

Identity: **Liquid Detergent**

Brands: **DAWN Manual Pot and Pan Detergent (Professional Line)**

Hazard Rating:		
	Health: 1	4=EXTREME
	Flammability: 1	3=HIGH
	Reactivity: 0	2= MODERATE
		1=SLIGHT

Emergency Telephone Number: 1-800-332-7787 or call Local Poison Control Center

SECTION II - COMPOSITION AND INGREDIENTS

Ingredients/Chemical Name: Water (7732-18-5), Sodium Alkyl Sulfonate (68585-47-7), Sodium Alkyl Ethoxylate Sulfonate (68585-34-2), Amine Oxide (70592-80-2), Ethyl Alcohol (64-17-5), Sodium Lauryl Benzene Sulfonate (25155-30-0), Colorant and Perfume.

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200.

Chemical Name	Common Name	CAS No.	Recommended Limits	Composition Range	LD50/LC50
Ethyl alcohol	Ethanol	64-17-5	ACGIH TLV: 1880 mg/m^3	5-10%	N.A.

SECTION III - HAZARDS IDENTIFICATION

Health Hazards (Acute and Chronic):

Ingestion: Ingestion may cause transient gastrointestinal irritation. with nausea, vomiting and/or diarrhea.

Eye Contact: May cause mild, transient irritation with stinging, itching, swelling and tearing.

Skin: Prolonged contact with undiluted product may be drying or cause mild irritation.

SECTION IV - FIRST AID INFORMATION

Emergency and First Aid Procedures:

Ingestion: Drink 1 or 2 two large glasses of water.

Eye Contact: Flush with large amounts of water for 15 minutes

Skin: If prolonged contact occurs, rinse thoroughly with water. If spilled on clothing, change clothes. It symptoms persist or recur, seek medical attention.

Other: Product package contains the following warnings: EYE IRRITANT: Avoid eye contact. Eye contact may cause mild to moderate transient eye irritation. If eye irritation occurs, flush with water for 15 minutes. If irritation persists, seek medical attention.

SECTION V - FIRE FIGHTING INFORMATION

Flash Point (Method Used): 115-135°F Pensky-Martens (cc) **Explosive Limits:** *LEL:* N/A *UEL:* N/A

Extinguishing Media: CO_2, water or dry chemical

Special Fire Fighting Procedures: None. Although this product has a flash point below 200°F (closed cup), it is an aqueous solution containing ethyl alcohol, which does not sustain combustion.

Unusual Fire Hazards: None

Stability: Stable

Incompatibility (Materials to avoid): None

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: None

Environmental Precautions: DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. Do not landfill. Small quantities may be disposed of via sewer. Recycling is recommended for undiluted scrap product.

Steps To Be Taken in Case Large Quantities of Material are Released or Spilled: Prevent large spills from reaching a waterway. Sorbents may be used. Read "Waste Disposal Method" below for further information.

SECTION VII - HANDLING AND STORAGE

Precautions To Be Taken in Handling and Storing: No unusual precautions necessary.

Other Precautions: None known.

SECTION VIII - EXPOSURE CONTROLS, PERSONAL PROTECTION

Respiratory Protection (Specify Type): None required with normal use.

Ventilation General

Eye Protection: None required with normal use. If splash is likely, goggles may be needed.

Manufacturing: For splash protection, use chemical goggles. Eye was facilities desirable.

Protective Gloves: None required with normal use. Protective gloves should be used for prolonged contact with undiluted product.

Other Protective Equipment: None required with normal use.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point °F: Not known

Vapor Pressure (mm Hg): N/A

Vapor Density (Air=1): N/A

Appearance and Odor: Blue liquid. Product is perfumed

Coefficient of Water/Oil Disitribution: N/A

Specific Gravity (H_2O=1): ~1

Percent Volatile by Volume (%): ~60-65%

Evaporation Rate (nBuOAc=1): Unknown

Freezing Point: ~30°F

pH (1% solution): ~8

Solubility in Water: Completely

SECTION X - STABILITY AND REACTIVITY

Possible Hazardous Reactions/Conditions/By Products: None known

Conditions to Avoid: None

Materials to Avoid: None

Hazardous Decomposition Products: None known

Other Recommendations: None

Stability: *Stable*

Hazardous Polymerization: *Will Not Occur*

SECTION XI - TOXICOLOGICAL INFORMATION

LD50 (rats oral): approximately 12 mL/kg

ED50: approximately 2.3 mL/kg

Liquid hand dishwashing detergents have a relatively low order of toxicity. They may be irritating, but they are not expected to be corrosive. They are expected to be emetic.

SECTION XII - ECOLOGICAL INFORMATION

All surfactants are readily biodegradable. This product is safe for septic tanks.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. Do not landfill. Small quantities, including solutions of diluted detergents, may be disposed of via sewer or in the trash. Recycling is recommended for undiluted scrap product.

SECTION XIV - TRANSPORT INFORMATION

DOT Classification: Not DOT regulated in packages as sold. Not DOT regulated in packaging of less than 119 gallons. When shipped in bulk, classified as compounds, cleaning liquid Class 3 (NA 1993)

SECTION XV - ADDITIONAL REGULATORY INFORMATION

All components are listed on the US TSCA Inventory. No components are affected by Significant New Use Rules (SNURs) under TSCA.

No components of Dawn are subject to California Proposition 65.

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified with Hazard Criteria of the Canadian Control Products Regulation (CPR) and this MSDS contains all information required by the Canadian Products Regulation.

SECTION XVI - OTHER INFORMATION
*N/A. - Not Applicable *N/K. - Not Known
The submission of this MSDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied is for use only in connection with occupational safety and health.
The information contained herein has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. The information relates to the specific material designated herein, and does not relate to the use in combination with any other material or any other process. Procter & Gamble assumed no responsibility for injury to the recipient or third persons, for any damage to any property resulting from misuse of the controlled product.

Procter&Gamble Professional®

MATERIAL SAFETY DATA SHEET

PGC 45114
Joy

1. Product and Company Identification

Material name	**Joy Manual Pot and Pan Detergent - concentrate**
Product Code	95122111
Version #	04
Revision date	11-03-2010
Manufacturer	Procter & Gamble Professional
Address	2 P&G Plaza Cincinnati Ohio 45202 US
P&G Telephone Number:	1-800-332-7787
Emergency 24-hr Telephone #:	CHEMTREC 1-800-424-9300

2. Hazards Identification

Potential health effects

Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Health injuries are not known or expected under normal use. Accidental exposure will cause a mild but transient irritation.
Skin	Health injuries are not known or expected under normal use. May cause transient irritation. Prolonged or repeated contact may be drying to skin.
Inhalation	Health injuries are not known or expected under normal use.
Ingestion	Health injuries are not known or expected under normal use. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential environmental effects	Considering the limited amount applied during use and the size of the container, the risk of adverse effects is considered small.

3. Composition / Information on Ingredients

Components	CAS #	Percent
ETHANOL	64-17-5	1-5

4. First Aid Measures

First aid procedures

Eye contact	After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.
Skin contact	Rinse with water if prolonged contact occurs. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air.
Ingestion	Drink 1 or 2 glasses of water. If ingestion of a large amount does occur, call a poison control center immediately.

5. Fire Fighting Measures

Environmental precautions Prevent further leakage or spillage if safe to do so.

Extinguishing media

Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Protection of firefighters

Specific hazards arising from the chemical	This product will not support sustained combustion when in contact with open flame above the indicated flash point.
Protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Wear suitable protective clothing.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Clean-up methods and materials and containment measures	In case of spills, beware of slippery floors and surfaces. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

7. Handling and Storage

Handling	Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of reach of children.
Storage	Store in a cool and well-ventilated place. Keep from freezing.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
ETHANOL (64-17-5)	STEL	1000 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
ETHANOL (64-17-5)	PEL	1000 ppm 1900 mg/m3

Engineering controls	Provide adequate ventilation.

Personal protective equipment

Eye / face protection	Not normally needed.
Skin protection	Not normally needed. For prolonged or repeated skin contact use suitable protective gloves. Recommended gloves include rubber or neoprene.
Respiratory protection	Not normally needed.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Color	Yellow
Odor	Lemon
Odor threshold	Not available.
Physical state	Liquid.
pH	8.7 - 9.3
Melting point	Not available.
Freezing point	30 °F (-1.1 °C)
Boiling point	Not available.
Flash point	115 - 135 °F (46.1 - 57.2 °C) Does not sustain combustion.
Evaporation rate	Not available.
Vapor pressure	Not available.
Specific gravity	1
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available
VOC	5.1514 % estimated

Percent volatile	62.975 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	This is a stable material.
Conditions to avoid	Keep away from heat, sparks and open flame.
Hazardous decomposition products	No hazardous decomposition products are known.
Hazardous polymerization	Will not occur.

11. Toxicological Information

Toxicological data

Components	Test Results
ETHANOL (64-17-5)	Acute Inhalation LC50 Mouse: 0.039 mg/l 4.00 Hours Acute Inhalation LC50 Rat: 20000 mg/l 10.00 Hours Acute Oral LD50 Dog: 5.5 g/kg Acute Oral LD50 Guinea pig: 5.6 g/kg Acute Oral LD50 Mouse: 3450 mg/kg Acute Oral LD50 Rat: 7060 mg/kg Acute Oral LD50 Rat: 6.2 g/kg Acute Other LD50 Mouse: 933 mg/kg Acute Other LD50 Rat: 1440 mg/kg

Sensitization	Not available.
Local effects	Contact may irritate or burn eyes.
Chronic effects	Hazardous by OSHA criteria. Hazardous by WHMIS criteria.
Skin corrosion/irritation	Not available.

12. Ecological Information

Environmental effects	Based on ecotoxicity and fate data for the individual ingredients in this specific formulation, and for related consumer household cleaning products formulations, this product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment at relevant environmental concentrations. This product is intended for dispersive use and should not be disposed of directly into the environment.

13. Disposal Considerations

Waste codes	Not regulated. Product is an aqueous solution that contains less than 24% alcohol.
Disposal instructions	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. Transport Information

Further information Product is an aqueous solution of <24% ethanol.

DOT

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

ETHANOL: 100.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance
No

Section 311 hazardous chemical
Yes

State regulations

ILLRTK

Contains no Illinois Right To Know toxic substances.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

ETHANOL (CAS 64-17-5)	ALCOHOLIC BEVERAGES, WHEN ASSOCIATED WITH ALCOHOL ABUSE

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

ETHANOL (CAS 64-17-5)	ALCOHOLIC BEVERAGES, WHEN ASSOCIATED WITH ALCOHOL ABUSE

US - California Proposition 65 - CRT: Listed date/Developmental toxin

ETHANOL (CAS 64-17-5)	ETHYL ALCOHOL IN ALCHOLIC BEVERAGES

US - Connecticut Hazardous Material Survey: Listed substance

ETHANOL (CAS 64-17-5)	LISTED

US - Massachusetts RTK - Substance: Listed substance

ETHANOL (CAS 64-17-5)	LISTED

US - New Jersey RTK - Special Hazard: Listed substance

ETHANOL (CAS 64-17-5)	SPEC_HAZAROUS

US - New Jersey RTK - Substances: Listed substance

ETHANOL (CAS 64-17-5)	LISTED

US - Pennsylvania RTK - Hazardous Substances: Listed substance

ETHANOL (CAS 64-17-5)	LISTED

US - Rhode Island RTK - Hazardous Substances: Listed substance

ETHANOL (CAS 64-17-5)	LISTED

Canadian regulations
All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Inventory Status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

HMIS® ratings
Health: 2
Flammability: 2
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 2
Instability: 0
Special hazards:

Disclaimer

This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

GRAINGER
FOR THE ONES WHO GET IT DONE

[X] Close this window MSDS

Common Name: DAPTEX LATEX MULTI-PURPOSE INSULATING FOAM SEALANT
Manufacturer: DAP
MSDS Revision Date: 3/9/2007

Grainger Item Number(s): 4UK97
Manufacturer Model Number(s):

MSDS Table of Contents

Click the desired link below to jump directly to that section in the MSDS.

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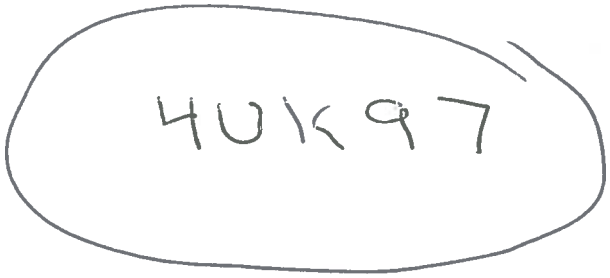


MATERIAL SAFETY DATA SHEET

24 HOUR EMERGENCY PHONE NUMBERS:
MEDICAL:
1-800-327-3874
1-513-558-5111

TRANSPORTATION:
1-800-535-5053
1-352-323-3500

NOTE:
NATIONAL RESPONSE CENTER EMERGENCY NUMBERS TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT INVOLVING CHEMICALS.

IMPORTANT:
PROVIDE THIS INFORMATION TO EMPLOYEES, CUSTOMERS, AND USERS OF THIS PRODUCT. READ THIS MSDS BEFORE HANDLING OR DISPOSING OF THIS PRODUCT. THIS PRODUCT IS COVERED BY THE OSHA HAZARD COMMUNICATION STANDARD AND THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THIS STANDARD. ALL ABBREVIATED TERMS USED IN THIS MSDS ARE FURTHER DESCRIBED IN SECTION 16.

SECTION 1 - CHEMICAL PRODUCT / COMPANY INFORMATION

top

THIS MATERIAL SAFETY DATA SHEET IS AVAILABLE IN CANADIAN FRENCH AND HISPANIC AMERICAN SPANISH UPON REQUEST.

PRODUCT NAME: DAPTEX(R*) LATEX MULTI-PURPOSE INSULATING FOAM SEALANT

PRODUCT UPC NUMBER: 070798188266

PRODUCT USE/CLASS: PRESSURIZED LATEX FOAM

MANUFACTURER:
DAP INC.
2400 BOSTON STREET SUITE 200
BALTIMORE, MD 21224-4723
888-327-8477 (NON-EMERGENCY MATTERS)

REVISION DATE: 03/09/2007

SUPERCEDES: 02/23/2004

MSDS NUMBER: 00077346001

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

top

CHEMICAL NAME	CASRN	WT%
ISOPROPYL ALCOHOL	67-63-0	1-5
ETHYLENE GLYCOL	107-21-1	1-5
DIMETHYL ETHER	115-10-6	1-5
PROPANE	74-98-6	1-5
n-BUTANE	106-97-8	1-5
VINYL ACETATE	108-05-4	0.1-1.0

CHEMICAL NAME	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	SKIN
ISOPROPYL ALCOHOL	200 PPM	400 PPM	N.E.	400 PPM	N.E.	N.E.	NO
ETHYLENE GLYCOL	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	NO
DIMETHYL ETHER	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	NO
PROPANE	1000 PPM	N.E.	N.E.	1000 PPM	N.E.	N.E.	NO
n-BUTANE	1000 PPM	N.E.	N.E.	N.E.	N.E.	N.E.	NO
VINYL ACETATE	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	NO

EXPOSURE NOTES: NONE

IMPORTANT:
LISTED PERMISSIBLE EXPOSURE LEVELS (PEL) ARE FROM THE U.S. DEPT. OF LABOR OSHA FINAL RULE LIMITS (CFR 29 1910.1000); THESE LIMITS MAY VARY BETWEEN STATES.

NOTE:
AN EMPLOYEE'S SKIN EXPOSURE TO SUBSTANCES HAVING A "YES" IN THE "SKIN" COLUMN IN THE TABLE ABOVE SHALL BE PREVENTED OR REDUCED TO THE EXTENT NECESSARY UNDER THE CIRCUMSTANCES THROUGH THE USE OF GLOVES, COVERALLS, GOGGLES OR OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT, ENGINEERING CONTROLS OR WORK PRACTICES

SECTION 3 - HAZARDS IDENTIFICATION

top

EMERGENCY OVERVIEW:
A WHITE TO OFF-WHITE LIQUID PRODUCT WITH A SLIGHT ALCOHOLIC ODOR.
DANGER!
CONTENTS UNDER PRESSURE. MAY CAUSE EYE, SKIN, NOSE, THROAT AND RESPIRATORY TRACT IRRITATION. HARMFUL IF SWALLOWED OR ABSORBED THROUGH THE SKIN. VAPORS HARMFUL IF INHALED. EXPOSURE TO TEMPERATURES ABOVE 120 DEG. F MAY CAUSE CAN TO RUPTURE. DO NOT PUNCTURE CAN. THIS PRODUCT CONTAINS ETHYLENE GLYCOL. REFER TO OTHER MSDS SECTIONS FOR OTHER DETAILED INFORMATION.

EFFECTS OF OVEREXPOSURE - EYE CONTACT:
MAY CAUSE EYE IRRITATION. CORROSIVE TO THE EYES!
DIRECT CONTACT WITH EYES WILL CAUSE SEVERE IRRITATION AND MAY LEAD TO BURNS AND PERMANENT EYE DAMAGE INCLUDING BLINDNESS. MISTS AND VAPORS MAY CAUSE MODERATE TO SEVERE EYE IRRITATION.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT:
MAY CAUSE SKIN IRRITATION AND/OR DERMATITIS. MAY CAUSE ALLERGIC SKIN REACTION OR SENSITIZATION. HARMFUL IF ABSORBED THROUGH THE SKIN. MAY BE CORROSIVE ON PROLONGED CONTACT.

ALLERGIC CONTACT DERMATITIS IS A COMMON EFFECT OF OCCUPATIONAL EXPOSURE TO BISPHENOL A DIGLYCIDYL ETHER. EXPOSURE TO BISPHENOL A DIGLYCIDYL ETHER MAY RESULT IN SEVERE BURNS TO THE SKIN. ECZEMA, URTICARIA, PHOTODERMATITIS, ERYTHEMA, PERSISTENT ITCHING, SEVERE FACIAL SWELLING, BLISTERING AND ERYTHEMA MULTIFORME HAVE BEEN REPORTED AFTER DERMAL EXPOSURE TO BISPHENOL A DIGLYCIDYL ETHER. SCLEROTIC SKIN CHANGES ARE POSSIBLE.

EFFECTS OF OVEREXPOSURE - INHALATION:
HARMFUL IF INHALED. INHALATION MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT (NOSE, MOUTH, MUCOUS MEMBRANES). INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL. OVEREXPOSURE TO FUMES OR VAPORS MAY CAUSE DELAYED LUNG DAMAGE AND CHEMICAL PNEUMONIA. EXPOSURE TO BISPHENOL A DIGLYCIDYL ETHER VAPORS MAY RESULT IN COUGHING, ASTHMATIC ATTACKS AND BRONCHOSPASM PERSISTING FOR SEVERAL DAYS. BRONCHOSPASM MAY ALSO OCCUR. ORGANIC ACID ANHYDRIDES MAY PRODUCE AN ASTHMA-RHINITIS SYNDROME, A FLU-LIKE SYNDROME, PULMONARY DISEASE-ANEMIA SYNDROME, OR IRRITANT RESPIRATORY EFFECTS.

EFFECTS OF OVEREXPOSURE - INGESTION:
HARMFUL IF SWALLOWED. INGESTION OF BISPHENOL A DIGLYCIDYL ETHER MAY RESULTS IN ORAL AND ESOPHAGEAL BURNS.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS:
PROLONGED AND REPEATED SKIN CONTACT MAY CAUSE IRRITATION AND POSSIBLY DERMATITIS. REPEATED OR PROLONGED EXPOSURE MAY CAUSE RESPIRATORY SYSTEM DAMAGE.

OVEREXPOSURE MAY CAUSE KIDNEY, CARDIOVASCULAR, SKIN AND LIVER DAMAGE.

ETHYLENE GLYCOL MAY CAUSE KIDNEY AND LIVER DAMAGE UPON PROLONGED AND REPEATED OVEREXPOSURES. STUDIES HAVE SHOWN THAT REPEATED INHALATION OF ETHYLENE GLYCOL HAS PRODUCED ADVERSE CARDIOVASCULAR CHANGES IN LABORATORY ANIMALS. ETHYLENE GLYCOL HAS BEEN SHOWN TO CAUSE BIRTH DEFECTS IN LABORATORY ANIMALS. MAY AGGRAVATE EXISTING SKIN, EYE OR LUNG CONDITIONS. BISPHENOL A DIGLYCIDYL ETHER MAY CAUSE DERMATITIS, LUNG INJURY OR CHEMICAL PNEUMONIA.

THIS PRODUCT CONTAINS VINYL ACETATE WHICH IS CLASSIFIED AS A CLASS 2B CARCINOGEN BY IARC. VINYL ACETATE WAS FOUND TO CAUSE CANCER IN THE RESPIRATORY TRACT OF LABORATORY ANIMALS. THERE IS NO EVIDENCE THAT VINYL ACETATE CAUSES CANCER IN HUMANS. THE IARC PUBLISHED A MONOGRAPH ON VINYL ACETATE (1995). IN THIS MONOGRAPH, IARC INDICATES "THERE IS INADEQUATE EVIDENCE IN HUMANS FOR CARCINOGENICITY OF VINYL ACETATE. THERE IS LIMITED EVIDENCE IN EXPERIMENTAL ANIMALS FOR THE CARCINOGENICITY OF VINYL ACETATE." NORMALLY, THIS LACK OF CONCLUSIVE EVIDENCE WOULD PLACE A SUBSTANCE IN THE

IARC 3 CLASSIFICATION (NOT CLASSIFIED AS A HUMAN CARCINOGEN). HOWEVER, BECAUSE VINYL ACETATE IS METABOLIZED TO ACETALDEHYDE, WHICH HAS AN IARC 2B (POSSIBLY CARCINOGENIC TO HUMANS) CLASSIFICATION, IT ALSO HAS BEEN LISTED UNDER CATEGORY 2B.

PRIMARY ROUTE(S) OF ENTRY:
SKIN CONTACT, SKIN ABSORPTION, INHALATION, EYE CONTACT

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE:
COLDS, ALLERGIES, ECZEMA, PSORIASIS, AND OTHER SKIN CONDITIONS, EMPHYSEMA, ASTHMA AND OTHER RESPIRATORY DISORDERS.

SECTION 4 - FIRST AID MEASURES

top

FIRST AID - EYE CONTACT:
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH LARGE QUANTITIES OF WATER FOR AT LEAST 15 MINUTES UNTIL IRRITATION SUBSIDES. GET MEDICAL ATTENTION IMMEDIATELY.

FIRST AID - SKIN CONTACT:
WASH OFF IMMEDIATELY WITH SOAP AND PLENTY OF WATER. REMOVE AND WASH CONTAMINATED CLOTHING.

FIRST AID - INHALATION:
IF INHALED, REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, LEAVE THE AREA TO OBTAIN FRESH AIR. IF CONTINUED BREATHING DIFFICULTY IS EXPERIENCED, GET MEDICAL ATTENTION IMMEDIATELY. MOVE PATIENT TO FRESH AIR. MONITOR FOR RESPIRATORY DISTRESS. IF COUGH OR DIFFICULTY BREATHING DEVELOPS, EVALUATE FOR RESPIRATORY TRACT IRRITATION, BRONCHITIS, OR PNEUMONITIS. ADMINISTER OXYGEN AND ASSIST VENTILATION AS REQUIRED. TREAT BRONCHOSPASM WITH INHALED BETA2 AGONIST AND ORAL OR PARENTERAL CORTICOSTEROIDS.

FIRST AID - INGESTION:
IF SWALLOWED, DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION IMMEDIATELY. IMMEDIATELY DILUTE WITH 4 TO 8 OUNCES (120 TO 240 ML) OF WATER OR MILK (NOT TO EXCEED 4 OUNCES/120 ML IN A CHILD).

NOTE TO PHYSICIAN: NONE.

COMMENTS:
CALL MEDICAL EMERGENCY AT 1-800-327-3874 IF ANY IRRITATION OR COMPLICATION ARISES FROM ANY OF THE ABOVE ROUTES OF ENTRY.

SECTION 5 - FIRE FIGHTING MEASURES

top

FLASH POINT, F: AEROSOL EXTREMELY FLAMMABLE)
METHOD: (NOT APPLICABLE)

LOWER EXPLOSIVE LIMIT, %: NOT ESTABLISHED
UPPER EXPLOSIVE LIMIT, %: NOT ESTABLISHED

EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS:
DO NOT SMOKE. EXTINGUISH ALL FLAMES AND PILOT LIGHTS, AND TURN OFF STOVES, HEATERS, ELECTRIC MOTORS AND OTHER SOURCES OF IGNITION DURING USE AND UNTIL ALL VAPORS ARE GONE. STORE AWAY FROM CAUSTICS AND OXIDIZERS. CONTAINERS MAY EXPLODE IF EXPOSED TO EXTREME HEAT.

SPECIAL FIREFIGHTING PROCEDURES:
WEAR SELF-CONTAINED BREATHING APPARATUS PRESSURE-DEMAND (NIOSH APPROVED OR EQUIVALENT) AND FULL PROTECTIVE GEAR. USE WATER SPRAY TO COOL EXPOSED SURFACES.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

top

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
WEAR PROPER PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. USE ABSORBENT MATERIAL OR SCRAPE UP DRIED MATERIAL AND PLACE IN CONTAINER.

SECTION 7 - HANDLING AND STORAGE

top

HANDLING:
KEEP OUT OF REACH OF CHILDREN!
DO NOT TAKE INTERNALLY. PROVIDE FRESH AIR SUCH THAT CHEMICAL ODORS CANNOT BE DETECTED DURING USE AND WHILE DRYING. USE ONLY WITH ADEQUATE VENTILATION. CONSTRUCTION AND REPAIR ACTIVITIES CAN ADVERSELY AFFECT INDOOR AIR QUALITY. CONSULT WITH OCCUPANTS OR A REPRESENTATIVE (I.E. MAINTENANCE, BUILDING MANAGER, INDUSTRIAL HYGIENIST, OR SAFETY OFFICER) TO DETERMINE WAYS TO MINIMIZE IMPACT.

AVOID BREATHING VAPOR AND CONTACT WITH EYES, SKIN AND CLOTHING. WASH THOROUGHLY AFTER HANDLING. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING VAPORS MAY BE HARMFUL OR FATAL. OPEN ALL WINDOWS AND DOORS OR USE OTHER MEANS TO ENSURE CROSS-VENTILATION AND FRESH AIR ENTRY DURING APPLICATION AND DRYING. ODOR IS NOT AN ADEQUATE WARNING FOR HAZARDOUS CONDITIONS. MAKE SURE NOZZLE IS DIRECTED AWAY FROM YOURSELF PRIOR TO DISCHARGE.

STORAGE:
STORE AWAY FROM CAUSTICS AND OXIDIZERS. STORE CONTAINERS AWAY FROM EXCESSIVE HEAT AND FREEZING. DO NOT STORE AT TEMPERATURES ABOVE 120 DEGREES F. PROTECT MATERIAL FROM DIRECT SUNLIGHT. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

top

PRECAUTIONARY MEASURES:
PLEASE REFER TO OTHER SECTIONS AND SUBSECTIONS OF THIS MSDS.

ENGINEERING CONTROLS:
PROVIDE SUFFICIENT GENERAL AND/OR LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE BELOW RECOMMENDED EXPOSURE LIMIT. GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT TO CONTROL AIRBORNE LEVELS. CHECK ALL LOW AREAS FOR PRESENCE OF VAPOR. ENSURE ADEQUATE VENTILATION, ESPECIALLY IN CONFINED AREAS. LOCAL VENTILATION OF EMISSION SOURCES MAY BE NECESSARY TO MAINTAIN AMBIENT CONCENTRATIONS BELOW RECOMMENDED EXPOSURE LIMITS. REFER TO OSHA STANDARDS 29 CFR 1910.94 AND 29 CFR 1910.107. VAPORS ARE HEAVIER THAN AIR AND MAY SPREAD ALONG FLOORS.

RESPIRATORY PROTECTION:
IN CASE OF INSUFFICIENT VENTILATION, WEAR SUITABLE RESPIRATORY EQUIPMENT. A NIOSH-APPROVED AIR PURIFYING RESPIRATOR WITH AN ORGANIC VAPOR CARTRIDGE OR CANISTER MAY BE NECESSARY UNDER CERTAIN CIRCUMSTANCES WHERE AIRBORNE CONCENTRATIONS ARE EXPECTED TO EXCEED EXPOSURE LIMITS. A RESPIRATORY PROTECTION PROGRAM THAT MEETS THE OSHA 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE. NO PERSONAL RESPIRATORY PROTECTIVE EQUIPMENT NORMALLY REQUIRED. IF CONCENTRATIONS EXCEED THE EXPOSURE LIMITS SPECIFIED, USE OF A NIOSH-APPROVED SUPPLIED AIR RESPIRATOR IS RECOMMENDED. WHERE THE PROTECTION FACTOR IS EXCEEDED, USE OF A SELF CONTAINED BREATHING APPARATUS (SCBA) MAY BE NECESSARY.

SKIN PROTECTION: RUBBER GLOVES.

EYE PROTECTION: GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT: NOT REQUIRED UNDER NORMAL USE.

HYGIENIC PRACTICES:
WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE RE-USE.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

top

BOILING RANGE: NOT ESTABLISHED

VAPOR DENSITY: HEAVIER THAN AIR

ODOR: SLIGHT ALCOHOLIC

ODOR THRESHOLD: NOT ESTABLISHED

APPEARANCE: WHITE TO OFF-WHITE

EVAPORATION RATE: SLOWER THAN n-BUTYL ACETATE

SOLUBILITY IN H2O: NOT ESTABLISHED

SPECIFIC GRAVITY: 0.996

FREEZE POINT: NOT ESTABLISHED

pH: BETWEEN 7.0 AND 12.0

VAPOR PRESSURE: NOT ESTABLISHED

VISCOSITY: NOT ESTABLISHED

PHYSICAL STATE: LIQUID

WHEN REPORTED, VAPOR PRESSURE OF THIS PRODUCT HAS BEEN CALCULATED THEORETICALLY BASED ON ITS CONSTITUENT MAKEUP AND HAS NOT BEEN DETERMINED EXPERIMENTALLY.

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 10 - STABILITY AND REACTIVITY

top

CONDITIONS TO AVOID: EXCESSIVE HEAT AND FREEZING.

INCOMPATIBILITY: INCOMPATIBLE WITH STRONG BASES AND OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:
NORMAL DECOMPOSITION PRODUCTS, I.E., COx, NOx.

HAZARDOUS POLYMERIZATION:
HAZARDOUS POLYMERIZATION WILL NOT OCCUR UNDER NORMAL CONDITIONS.

STABILITY: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

SECTION 11 - TOXICOLOGICAL INFORMATION

top

PRODUCT LD50: NOT ESTABLISHED
PRODUCT LC50: NOT ESTABLISHED

CASRN	CHEMICAL NAME	LD50	LC50	WT%
67-63-0	ISOPROPYL ALCOHOL	RAT: 5045 MG/KG	RAT: 16000 PPM/8H	1-5

107-21-1	ETHYLENE GLYCOL	RAT: 4700 MG/KG	RAT: 10876 MG/KG	1-5
108-05-4	VINYL ACETATE		RAT: 11400 MG/M3/4H	0.1-1.0

CARCINOGENICITY:

CAS NO.	CHEMICAL NAME	ACGIH	OSHA	IARC	NTP	WT%
108-05-4	VINYL ACETATE	CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS.	NOT LISTED.	POSSIBLE CARCINOGEN.	NOT LISTED.	0.1-1.0

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS: NONE

SECTION 12 - ECOLOGICAL INFORMATION

top

ECOLOGICAL INFORMATION:
ECOLOGICAL INJURIES ARE NOT KNOWN OR EXPECTED UNDER NORMAL USE.

SECTION 13 - DISPOSAL INFORMATION

top

DISPOSAL INFORMATION:
DISPOSE OF MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. STATE AND LOCAL REGULATIONS/RESTRICTIONS ARE COMPLEX AND MAY DIFFER FROM FEDERAL REGULATIONS. RESPONSIBILITY FOR PROPER WASTE DISPOSAL IS WITH THE OWNER OF THE WASTE.

EPA WASTE CODE IF DISCARDED (40 CFR SECTION 261): D001 IF RESIDUE REMAINS

SECTION 14 - TRANSPORTATION INFORMATION

top

DOT PROPER SHIPPING NAME: CONSUMER COMMODITY
DOT TECHNICAL NAME: N.A.
DOT HAZARD CLASS: ORM-D

PACKING GROUP: N.A.

HAZARD SUBCLASS: N.A.

DOT UN/NA NUMBER: N.A.

NOTE:
THE SHIPPING INFORMATION PROVIDED IS APPLICABLE FOR DOMESTIC GROUND TRANSPORT ONLY. DIFFERENT CATEGORIZATION MAY APPLY IF SHIPPED VIA OTHER MODES OF TRANSPORTATION AND/OR TO NON-DOMESTIC DESTINATIONS.

SECTION 15 - REGULATORY INFORMATION

top

CERCLA - SARA HAZARD CATEGORY:
THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA 'HAZARD CATEGORIES' PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:
IMMEDIATE HEALTH HAZARD, FIRE HAZARD, CHRONIC HEALTH HAZARD, PRESSURIZED HAZARD

SARA SECTION 313:
THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

CHEMICAL NAME	CAS NUMBER	WT%
ISOPROPYL ALCOHOL	67-63-0	1-5
ETHYLENE GLYCOL	107-21-1	1-5
VINYL ACETATE	108-05-4	0.1-1.0

TOXIC SUBSTANCES CONTROL ACT:
ALL INGREDIENTS IN THIS PRODUCT ARE EITHER ON TSCA INVENTORY LIST, OR OTHERWISE EXEMPT.

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES:
NONE

U.S. STATE REGULATIONS:

NEW JERSEY RIGHT-TO-KNOW:
THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP FIVE COMPONENTS IN THIS PRODUCT:

CHEMICAL NAME	CAS NUMBER	WT%
NON-HAZARDOUS POLYMER	PROPRIETARY	30-60
WATER	7732-18-5	15-40

PENNSYLVANIA RIGHT-TO-KNOW:
THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%:

CHEMICAL NAME	CAS NUMBER	WT%
NON-HAZARDOUS POLYMER	PROPRIETARY	30-60
WATER	7732-18-5	15-40

CALIFORNIA PROPOSITION 65:

WARNING:
THE FOLLOWING INGREDIENTS PRESENT IN THE PRODUCT ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: NONE

WARNING:
THE FOLLOWING INGREDIENTS PRESENT IN THE PRODUCT ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: NONE

SECTION 16 - OTHER INFORMATION

top

HMIS RATINGS:

HEALTH	1
FLAMMABILITY	3
REACTIVITY	0
PERSONAL PROTECTION	X

VOLATILE ORGANIC COMPOUNDS:
GR/LTR: 170.2
LB/GAL: 1.4
WT%: 11.306

REASON FOR REVISION: PERIODIC UPDATE

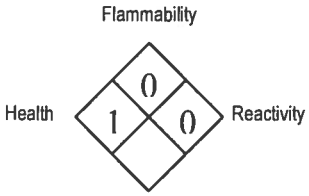
LEGEND:
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
N.D. - NOT DETERMINED
VOC - VOLATILE ORGANIC COMPOUND
PEL - PERMISSIBLE EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE
STEL - SHORT TERM EXPOSURE LIMIT
LD50 - LETHAL DOSE 50
F - DEGREE FAHRENHEIT
MSDS - MATERIAL SAFETY DATA SHEET
ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
NJRTK - NEW JERSEY RIGHT-TO-KNOW LAW
OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
HMIS - HAZARDOUS MATERIALS IDENTIFICATION SYSTEM
NTP - NATIONAL TOXICOLOGY PROGRAM
CEIL - CEILING EXPOSURE LIMIT
LC50 - LETHAL CONCENTRATION 50
C - DEGREE CELSIUS
CASRN - THE CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER

DAP BELIEVES THE DATA AND STATEMENTS CONTAINED HEREIN ARE ACCURATE AS OF THE DATE HEREOF. THEY ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. SINCE THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE USE AND PRECAUTIONARY HANDLING OF THE REFERENCED PRODUCT BY A PROPERLY TRAINED PERSON, IT IS THEREFORE THE RESPONSIBILITY OF THE USER TO:

(I) REVIEW THE RECOMMENDATIONS WITH DUE CONSIDERATION FOR THE SPECIFIC CONTEXT OF THE INTENDED USE AND

(II) DETERMINE IF THEY ARE APPROPRIATE.

Document # 6810-008



HMIS Rating

MATERIAL SAFETY DATA SHEET

GENERAL INFORMATION

PRODUCT NAME OR NUMBER (as it appears on label)	CATALOG NUMBER
YELLOW 77® PLUS Wire Pulling Lubricant	All "31" Series
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
IDEAL INDUSTRIES, INC.	**(815) 895-5181**
ADDRESS (Number, Street, City, State, Zip Code)	
Becker Place, Sycamore, IL 60178	
HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD CLASS NO. , HAZARD ID NO. (49 CFR 172.101)	
None	
CHEMICAL DESCRIPTION	FORMULA
Water-Wax Emulsion	Proprietary

SECTION I - INGREDIENTS

CAS REGISTRY NO.	%W	CHEMICAL NAME(S)*	Listed as a carcinogen in NTP, I ARC or OSHA 1910(z) (specify)
7732-18-5	<90	Water	No
64742-43-4	<5	Paraffin Wax	No
8009-03-8	<5	Petrolatum U.S.P	No
8042-47-5	<5	White Mineral Oil U.S.P (See *A)	No
9005-08-7	<5	Poly(oxy-1,2-ethanediyl), a-(1-oxo-9-octadecenyl)-w-(1-oxooctadecyl)oxy-	No
61791-44-4	<1	Ethanol, 2,2'-iminobis-,N-tallow alkyl derivs	No
8042-47-5 24838-91-8	<1	Acrylamide Sodium Acrylate Copolymer with Trideceth-6	No
1310-58-3	<2	20% Potassium Hydroxide	No
52-51-7	<0.1	2-Bromo-2-Nitropropane 1,3 Diol	No
5989-27-5	<0.1	Lemon Fragrance	No
6358-31-2	<0.1	Butanamide, 2-[(2-methoxy-4-nitrophenyl)azo]-N-(2-methoxyphenyl)-3-oxo-	No
9002-84-0	<0.1	Polytetrafluoroethylene	No

SECTION II - PHYSICAL DATA

BOILING POINT	SPECIFIC GRAVITY (H_2O=1)	PERCENT VOLATILE BY VOLUME (%)
212 °F 100 °C	0.93	<90
SOLUBILITY IN WATER	pH =	PERCENT SOLID BY WEIGHT (%)
Moderate	6.5 - 7.5	~15
APPEARANCE AND ODOR		IS MATERIAL: LIQUID SOLID GEL GAS PASTE POWDER
Yellow creamy paste, slight odor		

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT None method used C.O.C	FLAMMABLE LIMITS	LEL	UEL
		None	None
EXTINGUISHING MEDIA			
Use extinguishing media suitable for surrounding materials			
SPECIAL FIRE FIGHTING PROCEDURES			
Self-contained respiratory protection should be provided for fire fighters. Keep fire exposed containers cool with water.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			
None			

- None of the chemical raw materials contained in this formulation are considered hazardous under the Federal Hazards Communication Standard 29 C. F. R 1910.1200
- A: Oil is severely hydrotreated with a polymorphonuclear content at less than 0.1% and meets OSHA 29 C.F.R. 1910.1200.

SECTION IV - HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE - Conditions to Avoid None normally expected. Upon prolonged contact, may cause temporary eye discomfort.
THRESHOLD LIMIT VALUE None established
PRIMARY ROUTES OF ENTRY Inhalation ☒ Skin Contact ☒ Other (specify)
EMERGENCY FIRST AID PROCEDURES SKIN CONTACT: Wash with soap and water for 15 minutes. EYE CONTACT: Flush with water for 15 minutes. Inhalation: Remove to fresh air. INGESTION: Administer water or milk. Consult physician or local poison control center.

SECTION V - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID None
	STABLE	X	
INCOMPATIBILITY (materials to avoid) Avoid strong oxidizers			
HAZARDOUS DECOMPOSTION PRODUCTS: Excessive heat and burning may release oxides of carbon and nitrogen			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID Avoid prolonged storage at temperatures above 120 F.
	WILL NOT OCCUR	X	

SECTION VI - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED Wipe up, shovel or vacuum spilled material. Clean up spills immediately as they can be dangerously slippery.	
WASTE DISPOSAL METHOD Comply with Federal, state and local regulations for solid landfill.	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs) None Required	
RCRA HAZARDOUS WASTE NO. (40CFR 261.33) None Required	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water) 2.6 gms / ltr	
[3] Theoretical _____ lb/gal N/A	[3] Analytical _____ lb/gal N/A

SECTION VII - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) None normally required		
VENTILATION	LOCAL EXHAUST (Specify Rate) None	SPECIAL None
	MECHANICAL (General) (Specify Rate) Recommended in closed areas	OTHER None
PROTECTIVE GLOVES (specify type) None normally needed. -Neoprene if necessary	EYE PROTECTION (specify type) Safety glasses or splash goggles	
OTHER PROTECTIVE EQUIPMENT Eye fountain in work area is recommended.		

SECTION VIII - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Store at temperatures between 40 - 120° F.
OTHER PRECAUTIONS Keep away from children, infants and pets.

SECTION IX - ADDITIONAL INFORMATION

If material is used in extreme heat (>120° F), prolonged and repeated exposure could pose a risk of pulmonary disease. Exposure below TLV (5mg/m) appears to be without risk.

N/A = Not Applicable, N.E. = None Established

THIS MATERIAL SAFETY DATA SHEET PREPARED BY:	
NAME James R. MacMurdo	SIGNATURE James R. MacMurdo
TITLE Mgr., Corporate Quality Systems	
DATE 12-6-2011	

Safety Data Sheet

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Document Group:	26-5134-7	**Version Number:**	4.10
Issue Date:	04/19/18	**Supercedes Date:**	04/10/18

Product identifier
3M QTIII Cable Splice Kits with CC-2 cleaning pads, (Custom D&B Kits) (sealing mastic)

ID Number(s):

80-6116-1562-8, 80-6116-2614-6, 80-6116-2615-3, 80-6116-2616-1, 80-6116-2783-9, 80-6116-2784-7, 80-6116-2785-4, 80-6116-2786-2, 80-6116-2787-0, 80-6116-2788-8, 80-6116-2789-6, 80-6116-2790-4, 80-6116-2791-2, 80-6116-2796-1, 80-6116-2797-9, 80-6116-2798-7, 80-6116-2799-5, 80-6116-2800-1, 80-6116-2801-9, 80-6116-2802-7, 80-6116-2803-5, 80-6116-2804-3, 80-6116-2805-0, 80-6116-2806-8

Recommended use
Electrical

Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

30-6019-1, 26-2852-7

Reason for Reissue
Conversion to GHS format SDS.

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Safety Data Sheet

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Document Group:	26-2852-7	**Version Number:**	3.04
Issue Date:	11/04/19	**Supercedes Date:**	02/15/18

SECTION 1: Identification

1.1. Product identifier
3M™ Cable Preparation Kit CC-2 (Can)

Product Identification Numbers
78-8061-7605-9, 78-8127-6979-8, 80-6105-9299-2, 80-6112-0013-2, 80-6114-2769-3
4100028707, 7000006014, 7000132876

1.2. Recommended use and restrictions on use

Recommended use
Electrical, SOLVENT SOAKED PADS FOR CLEANING CABLE

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Flammable Liquid: Category 4.
Skin Corrosion/Irritation: Category 2.
Skin Sensitizer: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms

Hazard Statements
Combustible liquid.

Causes skin irritation.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Call a POISON CENTER or doctor/physician if you feel unwell.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Isoparaffinic Hydrocarbon	64742-48-9	50 - 70 Trade Secret *
Cotton pads	None	25 - 40
D-LIMONENE	5989-27-5	5 - 20 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:
No need for first aid is anticipated.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat,

drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Solid (Lint-free cloths soaked with liquid)
Color	White

Specific Physical Form:	Cloth pads soaked in liquid in can or bag
Odor	Citrus
Odor threshold	*No Data Available*
pH	7
Melting point	*No Data Available*
Boiling Point	380 ºF - 480 ºF
Flash Point	144 ºF [*Test Method:*Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	< 1 mmHg [@ 25 ºC]
Vapor Density	> 1 [*Ref Std:*AIR=1]
Density	0.76 g/ml
Specific Gravity	0.76 [*Ref Std:*WATER=1]
Solubility in Water	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	1.5 centipoise
Molecular weight	*No Data Available*
Volatile Organic Compounds	Approximately 740 g/l
VOC Less H2O & Exempt Solvents	760 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Sparks and/or flames

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be

present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
May be harmful if inhaled.
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.
Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Isoparaffinic Hydrocarbon	Inhalation-Vapor		LC50 estimated to be 20 - 50 mg/l
Isoparaffinic Hydrocarbon	Dermal	Rabbit	LD50 > 3,000 mg/kg
Isoparaffinic Hydrocarbon	Ingestion	Rat	LD50 > 5,000 mg/kg
D-LIMONENE	Inhalation-Vapor (4 hours)	Mouse	LC50 > 3.14 mg/l
D-LIMONENE	Dermal	Rabbit	LD50 > 5,000 mg/kg
D-LIMONENE	Ingestion	Rat	LD50 4,400 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Isoparaffinic Hydrocarbon	Rabbit	Irritant
D-LIMONENE	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Isoparaffinic Hydrocarbon	Rabbit	No significant irritation
D-LIMONENE	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Isoparaffinic Hydrocarbon	Guinea pig	Not classified
D-LIMONENE	Mouse	Sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Isoparaffinic Hydrocarbon	In vivo	Not mutagenic
Isoparaffinic Hydrocarbon	In Vitro	Some positive data exist, but the data are not sufficient for classification
D-LIMONENE	In Vitro	Not mutagenic
D-LIMONENE	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Isoparaffinic Hydrocarbon	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Isoparaffinic Hydrocarbon	Inhalation	Human and animal	Some positive data exist, but the data are not sufficient for classification
D-LIMONENE	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Isoparaffinic Hydrocarbon	Inhalation	Not classified for development	Rat	NOAEL 2.4 mg/l	during organogenesis
D-LIMONENE	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	premating & during gestation
D-LIMONENE	Ingestion	Not classified for development	Multiple animal species	NOAEL 591 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Isoparaffinic Hydrocarbon	Inhalation	central nervous	May cause drowsiness or	Human	NOAEL Not	

		system depression	dizziness	and animal	available	
Isoparaffinic Hydrocarbon	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Isoparaffinic Hydrocarbon	Inhalation	nervous system	Not classified	Dog	NOAEL 6.5 mg/l	4 hours
Isoparaffinic Hydrocarbon	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
D-LIMONENE	Ingestion	nervous system	Not classified		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Isoparaffinic Hydrocarbon	Inhalation	nervous system	Not classified	Rat	LOAEL 4.6 mg/l	6 months
Isoparaffinic Hydrocarbon	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.9 mg/l	13 weeks
Isoparaffinic Hydrocarbon	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 0.6 mg/l	90 days
Isoparaffinic Hydrocarbon	Inhalation	bone, teeth, nails, and/or hair | blood | liver | muscles	Not classified	Rat	NOAEL 5.6 mg/l	12 weeks
Isoparaffinic Hydrocarbon	Inhalation	heart	Not classified	Multiple animal species	NOAEL 1.3 mg/l	90 days
D-LIMONENE	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 75 mg/kg/day	103 weeks
D-LIMONENE	Ingestion	liver	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
D-LIMONENE	Ingestion	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 600 mg/kg/day	103 weeks

Aspiration Hazard

Name	Value
Isoparaffinic Hydrocarbon	Aspiration hazard
D-LIMONENE	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Flammable (gases, aerosols, liquids, or solids)

Health Hazards
Respiratory or Skin Sensitization
Skin Corrosion or Irritation
Specific target organ toxicity (single or repeated exposure)

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA. All required

components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 2 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: *2 **Flammability:** 2 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group:	26-2852-7	**Version Number:**	3.04
Issue Date:	11/04/19	**Supercedes Date:**	02/15/18

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Article Information Sheet

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This Article Information Sheet is provided as a courtesy in response to a customer request. A Safety Data Sheet (SDS) has not been prepared for these product(s) because they are articles. Articles are not subject to the Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200(b)(6)(v)). As defined in this standard: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Document Group:	30-6019-1	**Version Number:**	1.02
Issue Date:	06/06/17	**Supercedes Date:**	11/03/16

SECTION 1: Identification

1.1. Product identifier
3M™ Sealing Compound (Mastic)

Product Identification Numbers
78-8129-9350-5, 78-8141-5056-7, 78-8141-5057-5, 78-8141-5173-0, 78-8141-5174-8, 78-8141-5180-5

1.2. Recommended use and restrictions on use

Recommended use
Sealant on QT-III Cold Shrink, Intermediate

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt

CALCIUM CARBONATE	471-34-1	50 - 60
Polybutylene Rubber	Mixture	40 - 55
Phenol, 2-(2H-Benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-	25973-55-1	< 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated.

Skin Contact:
No need for first aid is anticipated.

Eye Contact:
No need for first aid is anticipated.

If Swallowed:
No need for first aid is anticipated.

SECTION 5: Fire-fighting measures

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Odor, Color, Grade:	Roll of black vulcanized rubber on polyester release liner
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	*Not Applicable*
Flash Point	No flash point
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Density	1.15 g/cm3 - 1.25 g/cm3
Specific Gravity	1.15 - 1.25 [*Details:*Ref Std: Water = 1]
Solubility In Water	*Not Applicable*
Solubility- non-water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*

SECTION 10: Stability and reactivity

This material is considered to be non reactive under normal use conditions.

SECTION 11: Toxicological information

Inhalation:
No health effects are expected

Skin Contact:
No health effects are expected

Eye Contact:
No health effects are expected

Ingestion:
No health effects are expected

Additional Information:
This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

SECTION 12: Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

SECTION 13: Disposal considerations

Dispose of contents/container in accordance with the local/regional/national/international regulations.

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	30-6019-1	**Version Number:**	1.02
Issue Date:	06/06/17	**Supercedes Date:**	11/03/16

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Safety Data Sheet

1. Identification

Product Identifier **4R Transfluid**

Other means of identification 4RM-221
SDS number

Recommended Use Chemical Carrier, Lubricant, Process Oil

Recommended restrictions None Known

Company Identification

Four R Marketing, LLC.
715 Ouachita 72
Smackover, AR 71762
United States of America

Emergency: (870) 312-1938 or (870)725-4437
Product Info: (870) 725-2900
Fax: (870) 725-3200
MSDS Request: john.seymour@fourrmarketing.com

2. Hazard(s) Identification

Physical Hazards **Not classified.**
Health hazards **Aspiration hazard**
Environmental hazard **Not Classified**
OSHA defined hazard **Not Classified**
Label element

Signal word **Danger**
Hazard statement **May be fatal is swallowed and enters airways.**
Prevention **Do not breathe gas/mist/vapors/spray.**
Response **If exposed or concerned: Get medical advice/attention**
Storage **Store in accordance with local/regional/national/international regulation**
Disposal **Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulation, and product characteristics at time of disposal. See Section 13 of this SDS for disposal instructions.**

Hazard(s) not otherwise Classified (HNOC)
Supplemental information None

3. Composition/ information on ingredients

Chemical Name: Petroleum Hydrocarbon
Common Name: Naphthenic Oil

Components	CAS Number		% Composition
Distillates, Hydrotreated Light Naphthenic	64742-53-6		100%
Oxidation Inhibitor	128-37-0		

4. First Aid Measures

Inhalation: If irritation, headache, nausea or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or symptoms persist.

Ingestion: If swallowed, observe for signs of stomach discomfort or nausea. If symptoms persist, give two glasses of water and get medical attention. Do not induce vomiting.

Skin: Wash skin thoroughly with soap and water for several minutes. If skin irritation develops or persist, get medical attention.

Eyes: Flush eyes with plenty of water for several minutes. If irritation or redness persists, get medical attention.

5. Fire Fighting Measures

Flammable Properties:

Flash Point (Cleveland Open Cup): 146°C (295°F)
Auto Ignition Temperature: > 315°C (> 600°F)
Lower Explosive Level (LEL): Not Determined
Upper Explosive Level (UEL): Not Determined
Flammability Classification: OSHA Class III-B Combustible Liquid, 29 CFR 1910.106(a)

Extinguishing Media:

Dry chemical, foam, CO2 and water mist or fog. Water may be used to cool below flash point. Do not use forced stream as this could cause fire to spread. Class ABC fire extinguisher

Combustion Products/ Specific Hazards:

Highly dependent on combustion conditions. A mixture of airborne solids, liquids and gases including smoke, fumes, carbon monoxide, carbon dioxide and unidentified organic compounds will be evolved when this material undergoes combustion.

Fire Fighting/ Instructions and Equipment:

This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined spaces without proper protective equipment. Firefighting personnel should wear respiratory protection and flame retardant clothing. (positive pressure if available).

General fire Hazard:

No unusual fire or explosion hazards noted. Flammability Class: Combustible IIIB

6. Accidental Release Measures

Spill Management:

Eliminate all sources of ignition in the area of the spilled material. Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Report spills to local authorities and/or the US Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

7. Handling and Storage

Handling and Storage Precautions:

Product should be stored in a clean dry container at ambient temperature. Product should remain stable for prolonged periods. Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors and may be dangerous. Empty drums should be completely drained, properly bunged and promptly disposed of in an environmentally safe manner and in accordance with all governmental regulations. NFPA Class III-B storage. Wash hands with soap and water before eating, drinking, smoking or use of restrooms. Do not use gasoline, solvents, kerosene or abrasive skin cleaners for washing exposed skin areas. Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

8. Exposure Controls and Personal Protection

Components	CAS Number	OSHA		ACGIH	
		TWA	STEL	TWA	STEL
Distillates, Hydrotreated Light Naphthenic	64742-53-6	5mg/m^3 (oil mist)	NA	5mg/m^3 (oil mist)	10mg/m^3 (oil mist)

Engineering Controls:

Adequate ventilation is required where excessive heating or agitation may occur to maintain concentration below permissible exposure limits (see above).

Eye/Face Protection:

Approved eye protection is recommended to safeguard against potential eye contact, irritation or injury. Depending on conditions, a face shield may be necessary.

Skin Protection:

Workers should wash exposed skin several times daily with soap and water. Contaminated clothing should be laundered at least weekly. Solvent resistant gloves may be worn if needed.

Respiratory Protection:

Airborne concentrations should be kept to lowest levels. If vapor (oil mist) is generated, use respirator approved by OSHA or NIOSH as appropriate. Positive pressure air-supplying regulator should be used for cleaning large spills or upon entry into tanks, vessels or other confined spaces.

9. Physical and Chemical Properties

Appearance	Clear & bright
Physical state	Liquid.
Form	Liquid.
Color	Light Amber to Golden
Odor	Mild Petroleum Odor
Odor threshold	Not available.
pH	Not applicable
Melting point/freezing point	< -45 °F (< -42.78 °C) ASTM D 5949

Initial boiling point and boiling range	> 435 °F (> 223.89 °C) ASTM D 2887
Flash point	≥ 295.0 °F (≥ 146.1 °C) Cleveland Open Cup ASTM D 92
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.

Upper/lower flammability explosive limits

Flammability limit - lower (%)	Not determined
Flammability limit - upper (%)	Not determined
Explosive limit – lower %	Not determined
Explosive limits – upper %	Not determined

Vapor pressure	Not determined
Vapor density	>5
Relative density	9.4 (20.0 C) ASTM D 4052
Solubility (ies)	
Solubility (water)	Insoluble
Partition Coefficient (n-octanol/water)	Not established.
Auto – ignition temperature	>600 F (>315.56 C) ASTM E 659
Decomposition temperature	Not determined
Viscosity	9.50 cSt (40 C) ASTM D 445

Section 10: Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport
Chemical stability	Stable.
Possibility of hazardous Reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight Hydrocarbons.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	May cause gastrointestinal discomfort if swallowed. Do not induce vomiting. Vomiting may increase risk of product aspiration. May be fatal if swallowed.
Inhalation	May be fatal if enters airways.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis
Eye contact	May be irritating to eyes.

Symptoms related to the physical, chemical and toxicological characteristics	Defatting of the skin. Coughing. Shortness of breath. Discomfort in the chest.

Information on toxicological effects:

Acute toxicity	Not applicable.
Skin corrosion/irritation	May cause defatting of the skin, but is neither an irritant nor a sensitizer.
Serious eye damage/ Eye irritation	Not classified. May cause minor irritation on eye contact.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not classified. May cause defatting of the skin, but is neither an irritant nor a sensitizer.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA Nota L – Meets EU requirements of less than 3% (w/w) DMSO extract for total Polycyclic aromatic compound (PAC) using IP346. Not classified
Reproductive toxicity	Contains no ingredient listed as toxic to reproduction
Specific target organ toxicity - single exposure	Not classified
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effect	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.
Further information	Risk of chemical pneumonia after aspiration.

12. Ecological Information

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Persistence and degradability	Not inherently biodegradable.
Bioaccumulative potential	Bioaccumulation is unlikely to be significant because of the low water solubility of this product.
Mobility in soil	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component

13. Disposal Considerations

Disposal instructions	When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
Hazardous waste code	Not applicable.
Waste from residue / the Unused products	Disposal of in accordance with local regulations. Avoid discharge into water courses or onto ground.
Contaminated packaging	Empty container should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local facilities.

14. Transport Information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of Marpol 73/78 And the IBC Code	Not Available.

15. Regulatory Information

U.S. Federal Regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA hazardous Substances – Not applicable

TSCA Section 12 (b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA hazardous Substance List (40 CFR 302.4)
Not Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not Listed

Superfund Amendment and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard – Yes
Delayed Hazard – No
Fire Hazard – No
Pressure Hazard – No
Reactivity Hazard – No

SARA302 Extremely hazardous substance Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CCA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations This product does not contain a chemical known to the state of California to cause cancer, birth defects or other reproductive harm. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as Carcinogens or reproductive toxins.

US. Massachusetts RTK – Substance List
Not regulated.

US. New Jersey Worker and Community Right- to Know Act
Not regulated.

US. Pennsylvania RTK – Hazardous Substances
Not regulated.

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.

International Inventories

Country(s) or region	Inventory Name	On inventory (yes/no)*
Australia	Australian inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non- Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States/Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this produce comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

Issuing Date: 05/20/15

Version #: 02

References:

ACGIH
EPA: AQUIRE Data Base
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Chemical Abstracts Service Registry Handbook
CRC: Handbook of Chemistry and Physics
ILO Safety Cards
International Labour Organization
International Maritime Organization Marine Pollutants List
NFPA Hazardous Chemical Data Sheets
NIOSH Pocket Guide
Registry of Toxic Effects of Chemical Substances (RTECS)
US DOT Hazardous Materials Regulations

This MSDS was prepared according to the OSHA Hazard Communication Standard (29CFR 1910.1200) and the ANSI MSDS Standard Z400.1 by
Four R Marketing, 715 Ouachita 72, Smackover, Arkansas 71762.

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SAFETY DATA SHEET

AF315

Section 1. Identification

GHS product identifier : AF315

Product code : 315

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation
400 Van Camp Road
Bowling Green, Ohio 43402
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec (800) 424-9300 24 hour

EPA Details : **EPA Statement:**
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criterial and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Below is the signal word as required on the pesticide label:

EPA Establishment Number :

EPA Registration Number :

EPA Signal Word :

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product. This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of nonpesticide chemicals. Please read complete product label.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards. (Per OSHA)
Corrosive. Causes irreversible eye damage.
Harmful if swallowed.
(Previous statements per EPA.)

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Section 2. Hazards identification

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	CAS number
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	≤3	68424-85-1
Alcohols, C12-15, ethoxylated	≤3	68131-39-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards. (Per OSHA) Causes irreversible eye damage. (Per EPA)

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards. (Per OSHA) Harmful if swallowed. (Per EPA)

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	None.
Alcohols, C12-15, ethoxylated	None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. < 1 hour (breakthrough time): disposable vinyl

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 8. Exposure controls/personal protection

Personal protective equipment (Pictograms) :

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Blue.-Green.

Odor : Fruity. Floral.

Odor threshold : Not available.

pH : 6.5 to 8

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: 99°C (210.2°F) [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1

Solubility : Easily soluble in the following materials: cold water and hot water.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	LD50 Oral	Rat	426 mg/kg	-
Alcohols, C12-15, ethoxylated	LD50 Oral	Rat	2 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Skin - Severe irritant	Rabbit	-	25 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal.
Routes of entry not anticipated: Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards. (Per OSHA) Causes irreversible eye damage. (Per EPA)

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards. (Per OSHA) Harmful if swallowed. (Per EPA)

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Acute EC50 37 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 64 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 4.15 ppb Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 32.2 ppb	Fish - Pimephales promelas	34 days
Alcohols, C12-15, ethoxylated	Acute EC50 0.7 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 0.39 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 302 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 1 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 83 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Alcohols, C12-15, ethoxylated	2.03 to 6.24	-	high

Section 12. Ecological information

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 4(a) proposed test rules**: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

TSCA 8(a) PAIR: 2-methylundecanal; α-hexylcinnamaldehyde; 2-(4-tert-butylbenzyl) propionaldehyde

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: Copper, [29H,31H-phthalocyaninato(2-)-.kappa.N29,. kappa.N30,.kappa.N31,.kappa.N32]-, chlorosulfonyl sulfo derivs., compds. with 2-(dimethylamino)ethanol; copper

Clean Water Act (CWA) 311: propylene oxide

Section 15. Regulatory information

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
propylene oxide	≤0.1	Yes.	10000	1444.3	100	14.4

SARA 304 RQ : 435729847.5 lbs / 197821350.8 kg [52258872.2 gal / 197821350.8 L]

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Classification
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	≤3	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1
Alcohols, C12-15, ethoxylated	≤3	ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE - Category 1

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL

Pennsylvania : The following components are listed: DENATURED ALCOHOL; ETHANOL; Isopropanol

California Prop. 65

⚠ **WARNING**: This product can expose you to Propylene oxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Propylene oxide	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

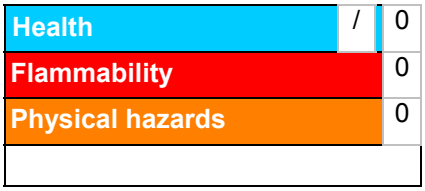
Not listed.

Inventory list

Australia	:	Not determined.
Canada	:	Not determined.
China	:	Not determined.
Europe	:	Not determined.
Japan	:	**Japan inventory (ENCS)**: Not determined. **Japan inventory (ISHL)**: Not determined.
Malaysia	:	Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	Not determined.
Thailand	:	Not determined.
Turkey	:	Not determined.
United States	:	Not determined.
Viet Nam	:	Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
Not classified.	

History

Date of printing : 2/18/2019

Date of issue/Date of revision : 2/18/2019

Date of previous issue : No previous validation

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

1. Identification

Product identifier **Liquid Alive® Enzyme Producing Bacteria**

Other means of identification

Part Number 23301, 23305, 23332, 23335, 23355, 23394, 23395

Recommended use Enzymes

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name ITW Pro Brands

Address 805 E. Old 56 Highway
Olathe, KS 66061

Country (U.S.A.)

Tel: +1 800-443-9536

In Case of Emergency 1-800-535-5053 (Infotrac)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye irritation Category 2A

Sensitization, skin Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statement

Prevention Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves.

Response If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Benzenesulfonic Acid, C10-16-alkyl Derivatives, Sodium Salts		68081-81-2	1 - 5
Alcohols, C6-12, Ethoxylated Propoxylated		689374-66-6	1 - 2
Cinnamic Aldehyde		104-55-2	0.1 - 0.2

Chemical name	Common name and synonyms	CAS number	%
Ethylene Glycol Monobutyl Ether		111-76-2	0.1 - 0.2
Tetrasodium EDTA		64-02-8	0.1 - 0.2

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethylene glycol monobutyl ether (CAS 111-76-2)	PEL	240 mg/m3 50 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	24 mg/m3 5 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Ethylene glycol monobutyl ether (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Ethylene Glycol Monobutyl Ether (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Ethylene Glycol Monobutyl Ether (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

Ethylene Glycol Monobutyl Ether (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Ethylene Glycol Monobutyl Ether (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Ethylene Glycol Monobutyl Ether (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color White.

Odor Neutra Gamma

Odor threshold	Not available.
pH	7.7
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	> 1 (air = 1)
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Completely soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.002

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity	Not known.

Components	Species	Test Results
Cinnamic Aldehyde (CAS 104-55-2)		
Acute		
Dermal		
LD50	Rabbit	620 mg/kg
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)		
Acute		
Dermal		
LD50	Rabbit	400 mg/kg
Oral		
LD50	Rat	530 - 2800 mg/kg
Tetrasodium EDTA (CAS 64-02-8)		
Acute		
Oral		
LD50	Rat	1658 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

ACGIH Carcinogens

Ethylene Glycol Monobutyl Ether (CAS 111-76-2) A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Ethylene Glycol Monobutyl Ether (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Ethylene Glycol Monobutyl Ether (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Tetrasodium EDTA (CAS 64-02-8)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	472 - 500 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Ethylene Glycol Monobutyl Ether	0.83

Mobility in soil No data available.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Serious eye damage or eye irritation
Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Cinnamic Aldehyde (CAS 104-55-2) Low priority

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

Ethylene Glycol Monobutyl Ether (CAS 111-76-2)

California Proposition 65

WARNING: California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Ethylene Glycol Monobutyl Ether (CAS 111-76-2)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Toxic Chemical Substances (TCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 01-26-2018

Version # 01

Disclaimer ITW Pro Brands cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

Carbon Dioxide

Airgas
an Air Liquide company

Section 1. Identification

GHS product identifier : Carbon Dioxide

Chemical name : Carbon dioxide, gas

Other means of identification : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744, Carbon Dioxide USP

Product type : Gas.

Product use : Synthetic/Analytical chemistry and Medical use.

Synonym : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744, Carbon Dioxide USP

SDS # : 001013

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

24-hour telephone : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Liquefied gas
Simple asphyxiant.

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.
May increase respiration and heart rate.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.
May cause frostbite.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : Carbon dioxide, gas

Other means of identification : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744, Carbon Dioxide USP

Product code : 001013

CAS number/other identifiers

CAS number : 124-38-9

Ingredient name	%	CAS number
Carbon Dioxide	100	124-38-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Section 4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid breathing gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Avoid contact with eyes, skin and clothing. Empty containers retain product residue and can be hazardous.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Carbon Dioxide	**ACGIH TLV (United States, 3/2017). Oxygen Depletion [Asphyxiant].** STEL: 54000 mg/m³ 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 9000 mg/m³ 8 hours. TWA: 5000 ppm 8 hours. **NIOSH REL (United States, 10/2016).** STEL: 54000 mg/m³ 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 9000 mg/m³ 10 hours. TWA: 5000 ppm 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 9000 mg/m³ 8 hours. TWA: 5000 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** STEL: 54000 mg/m³ 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 18000 mg/m³ 8 hours. TWA: 10000 ppm 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Compressed gas.]

Color : Colorless.

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Melting point : Sublimation temperature: -79°C (-110.2 to °F)

Boiling point : Not available.

Critical temperature : 30.85°C (87.5°F)

Flash point : [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 830 (psig)

Vapor density : 1.53 (Air = 1) Liquid Density@BP: Solid density = 97.5 lb/ft3 (1562 kg/m3)

Specific Volume (ft^3/lb) : 8.7719

Gas Density (lb/ft^3) : 0.114

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : 0.83

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not applicable.

Flow time (ISO 2431) : Not available.

Molecular weight : 44.01 g/mole

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Section 11. Toxicological information

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Carbon Dioxide	0.83	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1013	UN1013	UN1013	UN1013	UN1013
UN proper shipping name	CARBON DIOXIDE	CARBON DIOXIDE	CARBON DIOXIDE	CARBON DIOXIDE	CARBON DIOXIDE
Transport hazard class(es)	2.2	2.2	2.2	2.2	2.2
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Additional information

DOT Classification : **Limited quantity** Yes.
Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg.

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).
Explosive Limit and Limited Quantity Index 0.125
Passenger Carrying Road or Rail Index 75

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 75 kg. Cargo Aircraft Only: 150 kg.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: This material is listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Section 15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Europe : This material is listed or exempted.

Japan : **Japan inventory (ENCS)**: This material is listed or exempted.
Japan inventory (ISHL): This material is listed or exempted.

Malaysia : Not determined.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Taiwan : This material is listed or exempted.

Thailand : Not determined.

Turkey : This material is listed or exempted.

United States : This material is listed or exempted.

Viet Nam : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	1
Flammability		0
Physical hazards		3

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
GASES UNDER PRESSURE - Liquefied gas	Expert judgment

History

Date of printing : 2/12/2018

Date of issue/Date of revision : 2/12/2018

Date of previous issue : 4/25/2017

Version : 0.03

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Propane

Section 1. Identification

GHS product identifier : Propane

Chemical name : propane

Other means of identification : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

Product type : Liquefied gas

Product use : Synthetic/Analytical chemistry.

Synonym : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

SDS # : 001045

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

24-hour telephone : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE GASES - Category 1
GASES UNDER PRESSURE - Liquefied gas

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable gas.
May form explosive mixtures with air.
Contains gas under pressure; may explode if heated.
May cause frostbite.
May displace oxygen and cause rapid suffocation.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage : Protect from sunlight. Store in a well-ventilated place.

Section 2. Hazards identification

Disposal : Not applicable.

Hazards not otherwise classified : Liquid can cause burns similar to frostbite.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : propane

Other means of identification : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

Product code : 001045

CAS number/other identifiers

CAS number : 74-98-6

Ingredient name	%	CAS number
Propane	100	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. As this product rapidly becomes a gas when released, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Liquid can cause burns similar to frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

Section 4. First aid measures

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : Ingestion of liquid can cause burns similar to frostbite.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:, frostbite

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:, frostbite

Ingestion : Adverse symptoms may include the following:, frostbite

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Propane	**NIOSH REL (United States, 10/2016).** TWA: 1800 mg/m³ 10 hours. TWA: 1000 ppm 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. **ACGIH TLV (United States, 3/2017). Oxygen Depletion [Asphyxiant].**

Section 8. Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Thermal hazards : If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Compressed gas.]

Color : Colorless.

Odor : Odorless.BUT MAY HAVE SKUNK ODOR ADDED.

Odor threshold : Not available.

pH : Not available.

Melting point : -187.6°C (-305.7°F)

Boiling point : -161.48°C (-258.7°F)

Section 9. Physical and chemical properties

Critical temperature	:	96.55°C (205.8°F)
Flash point	:	Closed cup: -104°C (-155.2°F) Open cup: -104°C (-155.2°F)
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.
Lower and upper explosive (flammable) limits	:	Lower: 1.8% Upper: 8.4%
Vapor pressure	:	109 (psig)
Vapor density	:	1.6 (Air = 1)
Specific Volume (ft^3/lb)	:	8.6206
Gas Density (lb/ft^3)	:	0.116 (25°C / 77 to °F)
Relative density	:	Not applicable.
Solubility	:	Not available.
Solubility in water	:	0.02 g/l
Partition coefficient: n-octanol/water	:	1.09
Auto-ignition temperature	:	287°C (548.6°F)
Decomposition temperature	:	Not available.
Viscosity	:	Not applicable.
Flow time (ISO 2431)	:	Not available.
Molecular weight	:	44.11 g/mole
Aerosol product		
Heat of combustion	:	-46012932 J/kg

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.
Incompatible materials	:	Oxidizers
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Liquid can cause burns similar to frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

Ingestion : Ingestion of liquid can cause burns similar to frostbite.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:, frostbite

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:, frostbite

Ingestion : Adverse symptoms may include the following:, frostbite

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Propane	1.09	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1978	UN1978	UN1978	UN1978	UN1978
UN proper shipping name	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE
Transport hazard class(es)	2.1	2.1	2.1	2.1	2.1
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Additional information

DOT Classification : **Limited quantity**
Yes.

Packaging instruction
Passenger aircraft
Quantity limitation: Forbidden.

Cargo aircraft
Quantity limitation: 150 kg

Special provisions
19, T50

For domestic transportation only, UN1075 may be substituted for the UN number shown as long as the substitution is consistent on package markings, shipping papers, and emergency response information. See 49 CFR 172.102 Special Provision 19.
Containers of NON-ODORIZED liquefied petroleum gas must be marked either NON-ODORIZED or NOT ODORIZED as of September 30, 2006. [49 CFR 172.301(f), 326(d), 330(c) and 338(e)]

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).
Explosive Limit and Limited Quantity Index 0.125
ERAP Index 3000
Passenger Carrying Ship Index 65
Passenger Carrying Road or Rail Index Forbidden
Special provisions 29, 42

IATA : **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Cargo Aircraft Only: 150 kg.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

Clean Air Act (CAA) 112 regulated flammable substances: propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Europe : This material is listed or exempted.

Japan : **Japan inventory (ENCS)**: This material is listed or exempted.
Japan inventory (ISHL): This material is listed or exempted.

Malaysia : This material is listed or exempted.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Section 15. Regulatory information

Taiwan : This material is listed or exempted.

Thailand : Not determined.

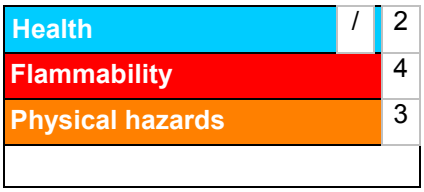
Turkey : This material is listed or exempted.

United States : This material is listed or exempted.

Viet Nam : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas	Expert judgment Expert judgment

History

Date of printing : 5/6/2018

Date of issue/Date of revision : 5/6/2018

Date of previous issue : 6/28/2017

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

Section 16. Other information

as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Other special considerations : The information below is given to call attention to the issue of “Naturally occurring radioactive materials”. Although Radon-222 levels in the product represented by this MSDS do not present any direct Radon exposure hazard, customers should be aware of the potential for Radon daughter build up within their processing systems, whatever the source of their product streams. Radon-222 is a naturally occurring radioactive gas which can be a contaminant in natural gas. During subsequent processing , Radon tends to be concentrated in Liquefied Petroleum Gas streams and in product streams having a similar boiling point range. Industry experience has shown that this product may contain small amounts of Radon-222 and its radioactive decay products, called Radon “daughters”. The actual concentration of Radon-222 and radioactive daughters in the delivered product is dependent on the geographical source of the natural gas and storage time prior to delivery. Process equipment (i.e. lines, filters, pumps and reaction units) may accumulate significant levels of radioactive daughters and show a gamma radiation reading during operation. A potential external radiation hazard exists at or near any pipe valve or vessel containing a Radon enriched stream, or containing internal deposits of radioactive material due to the transmission of gamma radiation through its wall. Field studies reported in the literature have not shown any conditions that subject workers to cumulative exposures in excess of general population limits. Equipment emitting gamma radiation should be presumed to be internally contaminated with alpha emitting decay products which may be a hazard if inhaled or ingested. Protective equipment such as coveralls, gloves, and respirator (NIOSH/MHSA approved for high efficiency particulates and radionuclides, or supplied air) should be worn by personnel entering a vessel or working on contaminated process equipment to prevent skin contamination, ingestion, or inhalation of any residues containing alpha radiation. Airborne contamination may be minimized by handling scale and/or contaminated materials in a wet state.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Safety Data Sheet (SDS)

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Manufacturer/Distributor:	Rainbow Technology Corporation (800)637-6047
Contact Person:	Larry Joe Steeley Jr.
Emergency Phone # (24 HOURS):	Chem-Tel, Inc. (800)255-3924
Trade Name:	Rainbow Fire Ant Killer; EPA Reg. No. 13283-14
Product Number:	4480-4 oz. Bags, 4483 -6 lb. Jar, 4484-2 lb. Jar
Chemical Name:	Mixture
Chemical Family:	Mixture
Formula:	Granular
Issue Date:	August 4, 2015
Replaces SDS Dated:	February 11, 2015

Section 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity - Oral	Category 3 - (H301)
Acute aquatic toxicity	Category 1 - (H400)
Hazardous to the Aquatic Environment - Chronic Hazard	Category 1 - (H410)

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

Signal word	Danger
Hazard Statements	H301 - Toxic if swallowed H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements	P102 - Keep out of reach of children P270 - Do not eat, drink or smoke when using this product P501 - Dispose of contents/ container to an approved waste disposal plant
EU Specific Hazard Statements	EUH401 - To avoid risks to human health and the environment, comply with the instructions for use
Additional phrases for PPP	SP1 - Do not contaminate water with the product or its container

2.3. Other hazards

No information available

Safety Data Sheet (SDS)

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Chemical Name	Weight-%	CAS No	EC No	Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	M-Factor	REACH Registration Number
Chlorpyrifos	97	2921-88-2	220-864-4	015-084-00-4	Acute Tox. 3 (H301) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	10000	-

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

Self-protection of the first aider Use personal protective equipment as required.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms None known

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use, Dry chemical, Carbon dioxide (CO2), Water spray (fog), Alcohol resistant foam.

Unsuitable Extinguishing Media
No information available.

5.2. Special hazards arising from the substance or mixture

No specific hazard known.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus
In the event of fire and/or explosion do not breathe fumes.

Safety Data Sheet (SDS)

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Other Information
See also section 8,13

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

7.3. Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

Safety Data Sheet (SDS)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Chlorpyrifos 2921-88-2		STEL: 0.6 mg/m³ TWA: 0.2 mg/m³ Skin	TWA: 0.2 mg/m³	S* TWA: 0.1 mg/m³	TWA: 0.2 mg/m³
Chemical Name	**Italy**	**Portugal**	**Netherlands**	**Finland**	**Denmark**
Chlorpyrifos 2921-88-2		TWA: 0.1 mg/m³		TWA: 0.2 mg/m³ STEL: 0.6 mg/m³ Skin	TWA: 0.2 mg/m³ Skin
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Chlorpyrifos 2921-88-2	Skin STEL 0.4 mg/m³ TWA: 0.2 mg/m³	Skin TWA: 0.2 mg/m³	NDSCh: 0.6 mg/m³ TWA: 0.2 mg/m³ Skin	TWA: 0.2 mg/m³ Skin STEL: 0.6 mg/m³	TWA: 0.2 mg/m³ STEL: 0.6 mg/m³ Skin

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Body Protection Gloves made of plastic or rubber, Suitable protective clothing, Rubber boots, Apron, Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact, Suitable protective clothing.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Property		Values	Method	Remarks
Appearance				
Physical state	:	Solid, crystalline		
Color	:	Off-white		
Odor	:	Slight, characteristic		
Odor threshold	:	No data available		
pH	:	----		Not Applicable
Melting point/freezing point °C	:	40.1 - 42.3	OECD 102	
Boiling point/boiling range °C	:	----		Decomposes
Flash point °C	:	----		No data available
Evaporation rate	:	----		No data available
Flammability (solid, gas)	:	Not flammable		
Upper/lower flammability or explosive limits	:	No data available		
Vapor pressure kPa	:	6.6 *10-7	OECD 104	25 °C
Vapor density	:	No data available		
Relative density	:	1.5 - 1.6	OECD 109	25 °C
Solubility(ies) mg/l	:	0.588	OECD 105	20 °C
Partition Coefficient (n-octanol/water) Log Pow	:			See Section 12 for more information
Autoignition temperature °C	:	280	EEC A.15	
Decomposition temperature °C	:	> 160	EEC A.2	
Kinematic viscosity mm2/s 40 °C	:	----		Not Applicable
Explosive properties	:	Not an explosive	EEC A.14	
Oxidizing properties	:	Not oxidizing	EEC A.17	

Safety Data Sheet (SDS)

9.2. Other information

Bulk density g/ml	:	----	No data available
Surface tension mN/m	:	----	Not Applicable

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Acute toxicity

		Values	Species	Method	Remarks
Oral LD50 mg/kg	:	168	Rat	OECD 401	
Dermal LD50 mg/kg	:	> 2000	Rat	OECD 402	
Inhalation LC50 mg/l/4h	:	2.89	Rat		
Skin corrosion/irritation	:	Non-irritating to the skin	Rabbit		
Serious eye damage/eye irritation	:	Not irritating to eyes	Rabbit		
Respiratory/skin sensitization	:	Not a skin sensitizer	Guinea pig		

Chronic toxicity

Germ cell mutagenicity

Chemical Name		
Chlorpyrifos	:	Not classified

Carcinogenicity .

Chemical Name		
Chlorpyrifos	:	Not Carcinogenic

Reproductive toxicity .

Chemical Name		
Chlorpyrifos	:	Not toxic for the reproductive system

STOT - single exposure

Chemical Name		
Chlorpyrifos	:	No information available

Safety Data Sheet (SDS)

STOT - repeated exposure
Chemical Name
Chlorpyrifos : No information available

Aspiration hazard
Chemical Name
Chlorpyrifos : No information available

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

Acute toxicity		Values	Species	Method	Remarks
Fish 96-hour LC50 mg/l	:	0.025	Oncorhynchus mykiss	EPA-FIFRA 72-1	
Crustacea 48-hour EC50 mg/l	:	0.0001	Daphnia magna	EPA-FIFRA 72-2	
Algae 72-hour EC50 mg/l	:	1.2		OECD 201	
Other plants EC50 mg/l	:	----			No data available

Terrestrial Toxicity
Birds Oral LD50 mg/kg
Chemical Name
Chlorpyrifos : 476

Bees Oral LD50 µg/bee
Chemical Name
Chlorpyrifos : 0.25

12.2. Persistence and degradability

Abiotic Degradation Water DT50 days Chemical Name		Values	Method	Remarks
Chlorpyrifos	:	16 - 35		pH 7; 25 ° C

Soil DT50 days
Chemical Name
Chlorpyrifos : 13 - 22

Biodegradation
Chemical Name
Chlorpyrifos : Not readily biodegradable

12.3. Bioaccumulative potential

Partition Coefficient (n-octanol/water) Log Pow Chemical Name		Values	Method	Remarks
Chlorpyrifos	:	4.76	OECD 107	

Bioconcentration factor (BCF)
Chemical Name
Chlorpyrifos : 1374 — No bioaccumulation potential

12.4. Mobility in soil

Adsorption/Desorption Chemical Name		Values	Method	Remarks
Chlorpyrifos	:	2785 - 31000	OECD 106	Koc

Safety Data Sheet (SDS)

12.5. Results of PBT and vPvB assessment
The components in this formulation do not meet the criteria for classification as PBT or vPvB

12.6. Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Improper disposal or reuse of this container may be dangerous and illegal.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

IMDG/IMO

14.1 UN/ID No	2783
14.2 Proper shipping name	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Chlorpyrifos)
14.3 Hazard Class	6.1
14.4 Packing Group	III
14.5 Marine pollutant	Yes
14.6 Special precautions for user	

RID/ADR

14.1 UN/ID No	2783
14.2 Proper shipping name	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Chlorpyrifos)
14.3 Hazard Class	6.1
14.4 Packing Group	III
14.5 Environmental hazard	Yes
14.6 Special precautions for user	

ICAO/IATA

14.1 UN/ID No	2783
14.2 Proper shipping name	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Chlorpyrifos)
14.3 Hazard Class	6.1
14.4 Packing Group	III
14.5 Environmental hazard	Yes
14.6 Special precautions for user	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Applicable

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Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical safety assessment

A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required. A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009.

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Revision Note *** - Change from previous version.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

RAINBOW TECHNOLOGY
Specialists in Utility Chemicals & Safety Items

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www.rainbowtech.net
Woman-Owned Business Enterprise - Founded 1971

Safety Data Sheet (SDS)

Printing date 11/25/2015 Reviewed on 11/25/2015

1 Identification

· **Product identifier**

· **Trade name: Jungle Formula Insect Repellent EPA Reg. No. 51147-13-13283**

· **Article number:** 4501

· **Recommended use and restriction on use**
· **Recommended use:** Insect repellent
· **Restrictions on use:** No relevant information available.

Date of Issue: November 25, 2015
Replaces SDS Dated: April 22, 2013

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Rainbow Technology Corp
261 Cahaba Valley Pkwy
Pelham, AL 35124

Toll Free: 1.800.637.6047
Local: 1.205.733.0333

· **Emergency telephone number:**
ChemTel Inc.
+1 (800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

HMIS CODES: FIRE: 4 HEALTH: 1 REACTIVITY: 1

· **Classification of the substance or mixture**

GHS02 Flame

Flam. Aerosol 1 H222 Extremely flammable aerosol.

GHS04 Gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.

GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 % of the mixture consists of component(s) of unknown toxicity.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

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Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 1)

· **Hazard pictograms:**

GHS02 GHS04 GHS07

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
propan-2-ol

· **Hazard statements:**
H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

· **Precautionary statements:**

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P251	Do not pierce or burn, even after use.
P211	Do not spray on an open flame or other ignition source.
P261	Avoid breathing mist, vapors, or spray.
P264	Wash thoroughly after handling.
P280	Wear eye protection.
P271	Use only outdoors or in a well-ventilated area.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

67-63-0	propan-2-ol Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	20-40%
134-62-3	N,N-diethyl-m-toluamide Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	20-40%

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Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 2)

68476-85-7	Petroleum gases, liquefied Flam. Gas 1, H220 Press. Gas, H280	20-40%
113-48-4	N-(2-ethylhexyl)-8,9,10-trinorborn-5-ene-2,3-dicarboximide Acute Tox. 3, H311	2.5-5.0%

· **Additional information:**
For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After skin contact:**
Product is manufactured for topical use. If irritation occurs, discontinue use and wash affected area with soap and water.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Unlikely route of exposure.
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Information for doctor**
· **Most important symptoms and effects, both acute and delayed:**
Headache
Breathing difficulty
Dizziness
Coughing
Irritant to skin and mucous membranes.
Irritant to eyes.
Nausea in case of ingestion.
Gastric or intestinal disorders when ingested.
· **Danger:** Harmful if inhaled.
· **Indication of any immediate medical attention and special treatment needed:**
If necessary oxygen respiration treatment.
Treat frost-bitten areas appropriately.

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Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 3)

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Alcohol resistant foam
Water fog / haze
Carbon dioxide
Fire-extinguishing powder
· **For safety reasons unsuitable extinguishing agents:** Water stream.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Danger of receptacles bursting because of high vapor pressure if heated.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
· **Additional information:**
Eliminate all ignition sources if safe to do so.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Cool endangered receptacles with water fog.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures:**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Keep away from ignition sources.
Protect from heat.
Particular danger of slipping on leaked/spilled product.
· **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Remove from the water surface (e.g. skim or suck off).
Dispose contaminated material as waste according to item 13.
Send for recovery or disposal in suitable receptacles.
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

(Cont'd. on page 5)

Safety Data Sheet (SDS)

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Trade name: Jungle Formula Insect Repellent

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7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
Keep away from heat and direct sunlight.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120 °F / 49 °C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
Provide ventilation for receptacles.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
· **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
· **Specific end use(s):** No relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-63-0 propan-2-ol	
PEL (USA)	Long-term value: 980 mg/m³, 400 ppm
REL (USA)	Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm
TLV (USA)	Short-term value: 984 mg/m³, 400 ppm Long-term value: 492 mg/m³, 200 ppm BEI
EL (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE

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Printing date 11/25/2015 Reviewed on 11/25/2015

Trade name: Jungle Formula Insect Repellent

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68476-85-7 Petroleum gases, liquefied	
PEL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
REL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
TLV (USA)	refer to Appendix F in TLVs and BEIs book
EL (Canada)	Short-term value: 1250 ppm Long-term value: 1000 ppm
EV (Canada)	Long-term value: 1,000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm

· **Ingredients with biological limit values:**	
67-63-0 propan-2-ol	
BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.
Avoid close or long term contact with the skin.
· **Engineering controls:** No relevant information available.
· **Breathing equipment:**
Not required under normal conditions of use.
Use suitable respiratory protective device in case of insufficient ventilation.
For spills, respiratory protection may be advisable.
· **Protection of hands:**
Gloves are advised for repeated or prolonged contact.
Protection may be required for spills.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment** No relevant information available.

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Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 6)

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General information**	
· **Appearance:**	
Form:	Aerosol
Color:	Colorless
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition:**	
Melting point/Melting range:	Not applicable, as aerosol.
Boiling point/Boiling range:	Not applicable, as aerosol.
· **Flash point:**	Extremely flammable aerosol. Not applicable, as aerosol.
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Not determined.
· **Vapor pressure:**	Not determined.
· **Density at 20 °C (68 °F):**	0.88 g/cm³ (7.344 lbs/gal)
· **Relative density:**	Not determined.
· **Vapor density:**	Not determined.
· **Evaporation rate:**	Not applicable.
· **Solubility in / Miscibility with:**	
Water:	Insoluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No relevant information available.

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Printing date 11/25/2015 Reviewed on 11/25/2015

Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 7)

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
Keep away from heat and direct sunlight.
Danger of receptacles bursting because of high vapor pressure if heated.
· **Possibility of hazardous reactions:**
Develops readily flammable gases / fumes.
Reacts violently with oxidizing agents.
Reacts with strong acids and alkali.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
Toxic fumes may be released if heated above the decomposition point.
Extremely flammable aerosol.
· **Conditions to avoid:**
Excessive heat.
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
· **Incompatible materials:** No relevant information available.
· **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons
Nitrogen oxides (NOx)

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
134-62-3 N,N-diethyl-m-toluamide		
Oral	LD50	1950 mg/kg (rat)
Dermal	LD50	3180 mg/kg (rabbit)
Inhalative	LC50/4h	5.95 mg/l (rat)
113-48-4 N-(2-ethylhexyl)-8,9,10-trinorborn-5-ene-2,3-dicarboximide		
Oral	LD50	2800 mg/kg (rat)
Dermal	LD50	470 mg/kg (rat)

· **Primary irritant effect:**
· **On the skin:** Irritant to skin and mucous membranes.
· **On the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
Inhalation of concentrated vapors as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

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Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 8)

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
67-63-0	propan-2-ol	3

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Inhalation.
Eye contact.
Skin contact.
· **Acute effects (acute toxicity, irritation and corrosivity):**
Vapors have narcotic effect.
Harmful if inhaled.
· **Repeated dose toxicity:** Repeated exposure may cause skin dryness or cracking.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** May cause drowsiness or dizziness.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:**
Toxic for aquatic organisms

113-48-4 N-(2-ethylhexyl)-8,9,10-trinorborn-5-ene-2,3-dicarboximide	
LC50	1.4 mg/l (Oncorhynchus mykiss)
136-45-8 dipropyl pyridine-2,5-dicarboxylate	
LC50	1.0 mg/l (Oncorhynchus mykiss)

· **Persistence and degradability:** No relevant information available.
· **Behavior in environmental systems**
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Ecotoxical effects:**
· **Remark:** Due to mechanical actions of the product (e.g. agglutinations), damages may occur.
· **Additional ecological information**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.

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Safety Data Sheet (SDS)

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Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 9)

· **Other adverse effects:** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Contact waste processors for recycling information.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**
· **DOT, ADR, IMDG, IATA** UN1950

· **UN proper shipping name**

Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

· **DOT** Aerosols
· **ADR** 1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
· **IMDG** AEROSOLS, MARINE POLLUTANT
· **IATA** Aerosols, flammable

· **Transport hazard class(es)**

· **DOT**

· **Class** 2.1
· **Label** 2.1

· **ADR**

· **Class** 2 5F Gases

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Safety Data Sheet (SDS)

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Trade name: Jungle Formula Insect Repellent

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· **Label**	2.1
· **IMDG**	
· **Class**	2.1
· **Label**	2.1
· **IATA**	
· **Class**	2.1
· **Label**	2.1
· **Packing group**	Aerosols are not assigned a packing group.
· **Environmental hazards**	Product contains environmentally hazardous substances: dipropyl pyridine-2,5-dicarboxylate
· **Marine pollutant:**	Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **Special precautions for user**	Warning: Gases
· **Danger code (Kemler):**	-
· **EMS Number:**	F-D,S-U
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation"**	UN 1950 AEROSOLS, 2.1

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 302 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 304 (emergency release notification):**
None of the ingredients are listed.

· **Sections 311/312 (hazardous chemical threshold planning quantity in pounds):**
None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

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Safety Data Sheet (SDS)

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Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 11)

· **Section 313 (Specific toxic chemical listings):**

67-63-0	propan-2-ol
136-45-8	dipropyl pyridine-2,5-dicarboxylate

· **TSCA (Toxic Substances Control Act)**

Some ingredients listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

136-45-8	dipropyl pyridine-2,5-dicarboxylate

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)**

EPA Product Registration : 51147-13.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: Causes substantial but temporary eye injury. Harmful if swallowed. Do not get in eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

FIRST AID

IF IN EYES:Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or a doctor. Do not give anything by mouth to an unconscious person. Have the product container or label with you when calling a poison control center or doctor or going for treatment. For information regarding medicalemergencies or pesticide incidents, call 1-877-852-0086.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Keep this product in its tightly closed original container, when not in use. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals.

PESTICIDE DISPOSAL AND CONTAINER HANDLING: Do Not Puncture or Incinerate! Nonrefillable container. Do not reuse or refill this container. If empty: Place in trash or offer for recycling if available.

If partly filled: Call your local solid waste agency for disposal instructions.

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Safety Data Sheet (SDS)

Printing date 11/25/2015 Reviewed on 11/25/2015

Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 12)

· **IARC (International Agency for Research on Cancer):**

67-63-0	propan-2-ol	3

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **Canadian substance listings**

· **Canadian Domestic Substances List (DSL):**

Some ingredients listed.

· **Canadian Ingredient Disclosure list (limit 0.1%):**

None of the ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 1%):**

67-63-0	propan-2-ol

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 11/25/2015 / -

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Gas 1: Flammable gases, Hazard Category 1
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
Press. Gas: Gases under pressure: Compressed gas
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 4: Acute toxicity, Hazard Category 4
Acute Tox. 3: Acute toxicity, Hazard Category 3
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· **Sources**
Website, European Chemicals Agency (http://http://echa.europa.eu/)
Website, US EPA Substance Registry Services (http://http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (https://www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN:

(Cont'd. on page 14)

Safety Data Sheet (SDS)

Printing date 11/25/2015 Reviewed on 11/25/2015

Trade name: Jungle Formula Insect Repellent

(Cont'd. of page 13)

978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

RAINBOW TECHNOLOGY
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Woman-Owned Business Enterprise - Founded 1971

Safety Data Sheet (SDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

MANUFACTURER/DISTRIBUTOR:	Rainbow Technology Corporation (800) 637-6047
CONTACT PERSON:	Larry Joe Steeley, Jr.
EMERGENCY PHONE #(24 HRS):	Chem-Tel, Inc. (800) 255-3924
TRADE NAME:	Rainbow Jungle Formula Insect Repellent Towelettes
EPA Reg No:	74289-2-13283
PRODUCT NUMBER:	4508
ISSUE DATE:	June 8, 2015
REPLACES SDS DATED:	September 7, 2010

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

(According to Regulation (EC) No 1272/2008)

Environmental Chronic Category 3
Serious Eye Damage/Eye Irritation Category 2
Skin Corrosion/Irritation Category 2

Signal Word:
Warning

Hazard Precautions:
H412 - Harmful to aquatic life with long lasting effects.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.

2.2. Label elements

Hazard Symbols (Pictogram):

Prevention Precautions:
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.

First Aid Precautions:
P337+P313 - If eye irritation persists: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362 - Take off contaminated clothing and wash before reuse.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P321 - Specific treatment (see supplemental information on this label).
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

Safety Data Sheet (SDS)

Storage Precautions:
Not required.

Disposal Precautions:
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

Single Exposure Target Organs:
Not applicable

Repeated Exposure Target Organs:
Not applicable

(According to Directive 67/548/EEC)

Symbol: Xn, Xi, F

Risk Phrases: R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36/38: Irritating to eyes and skin.

Safety Phrases: S2: Keep out of the reach of children.
S61: Avoid release to the environment. Refer to special instructions/safety data sheet.
S7: Keep container tightly closed.
S16: Keep away from sources of ignition - No smoking.

2.3. Other hazards

Signs and Symptoms of Potential Overexposure: May be harmful if ingested in sufficient quantities. Non-irritating to intact skin; keep away from mucous membranes and abraded skin. Contact with eyes causes irritation. High gas, vapor, or mist concentrations may be harmful if inhaled. This product does not present an immediate concern for emergency personnel.

Primary Route(s) of Exposure: Ingestion. Skin contact, Eye contact. Inhalation.

Medical Conditions Aggravated by Exposure: No data found

SECTION 3: Composition/information on ingredients

3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (%)	EINECS / ELINCS	EU Symbol	Risk Phrases
Water	7732-18-5	50 - 80	231-791-2	N/A	Not applicable
N,N-Diethyl-m-toluamide (DEET)	134-62-3	10 - 30	205-149-7	Xn, Xi	R22- R36/38-R52/53
Ethanol	64-17-5	8 - 12	200-578-6	F	R11
Other emulsifiers, emollients, preservatives and fragrances (present at < 1% each)	MULTIPLE	2 - 3	Not listed.	N/A	Not applicable
Emolient	TRADE SECRET	2 - 3	Not listed.	N/A	Not applicable
Lubricant	TRADE SECRET	2 - 3	Not listed.	N/A	Not applicable

NOTE: See Section 8 of this MSDS for exposure limit data for these ingredients.
See Section 15 of this MSDS for trade secret information (where applicable).
See Section 16 of this MSDS for the full text of the R-phrases above.

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin Contact: Keep away from mucous membranes and abraded skin

Eye Contact: Can cause moderate irritation. Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician.

Inhalation: High gas vapor or mist concentrations may be harmful if inhaled

Ingestion: May be harmful if ingested.

Safety Data Sheet (SDS)

4.2. Most important symptoms and effects, both acute and delayed

Acute: May be harmful if ingested in sufficient quantities. Non-irritating to intact skin; keep away from mucous membranes and abraded skin. Contact with eyes causes irritation. High gas, vapor, or mist concentrations may be harmful if inhaled. This product does not present an immediate concern for emergency personnel.

Delayed Effects: None known.

4.3. Indication of any immediate medical attention and special treatment needed

Thermal Exposure: Not applicable.

Note to Physician: No additional first aid information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media: Foam Dry chemical Water spray Carbon dioxide

5.2. Special hazards arising from the substance or mixture

Hazardous Products of Combustion: As with other organic materials, combustion will produce carbon monoxide and carbon dioxide.

Potential for Dust Explosion: not available

Special Flammability Hazards: Not applicable.

5.3. Advice for firefighters

Basic Fire Fighting Guidance: Wear self-contained breathing apparatus and protective clothing. Normal firefighting procedures may be used.

Flammability Classification (OSHA): Not applicable.

NFPA Rating

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuation Procedures: Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Special Instructions: Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

6.2. Environmental precautions

Prevent releases to soils, drains, sewers, and waterways.

6.3. Methods and material for containment and cleaning up

Containment Techniques and Clean-up Procedures: Contain spilled liquid with sand or vermiculite and place in chemical waste container Prevent runoff from entering drains, sewers, and streams

Special Reporting Requirements: Not applicable.

6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

Safety Data Sheet (SDS)

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for Unique Hazards: Not applicable.

Practices to Minimize Risk: Wear appropriate protective equipment when performing maintenance on contaminated equipment.
Wash hands thoroughly before eating or smoking after handling this material.

Special Handling Equipment: Avoid contact with eyes, skin, and clothing.
Use with adequate ventilation.
Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage Precautions & Recommendations: This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container closed when not in use.

Dangerous Incompatibility Reactions: Incompatible with oxidizing materials.

Incompatibilities with Materials of Construction: none known

7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits (United States): **OSHA PEL:** 1000 ppm TWA; 1900 mg/m3 TWA **ACGIH TLV:** 1000 ppm STEL

8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Personal Protective Equipment: Goggles or glasses with side shields. Clothing should be sufficient to minimize physical contact. The use of a NIOSH-approved organic vapor respirator is recommended whenever this product is used in a confined space or heated above ambient temperature.

Respirator Caution: Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.

Ventilation: All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.

Other Engineering Controls: All appropriate engineering controls should be used to minimize exposure potential. Use exhaust ventilation to keep airborne concentrations below exposure limits.

Thermal Hazards: Not applicable.

Additive or Synergistic Effects: None known.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature):	Moist Towelette		
Molecular Formula:	mixture	**Molecular Weight:**	mixture
Vapor Pressure:	Not available.	**Evaporation Rate:**	< 1 (Butyl Acetate = 1)
Specific Gravity or Density:	1.000	**Vapor Density (air = 1):**	Not available.
Boiling Point:	291.7 °C @ 760 mm Hg	**Freezing / Melting Point:**	Not available. Not available.
Solubility in Water:	water emulsion	**Octanol / Water Coefficient:**	Not available.
pH:	5.0 - 7.5 @ 1% aqueous solution	**Odor Threshold:**	Fragrance added
Viscosity:	Not available.	**Autoignition Temperature:**	Not available.
Flash Point and Method:	> 201°F (> 94°C) (COC)	**Flammable Limits:**	Not available. (LEL) – Not available. (UEL)

9.2. Other information

Not applicable.

Safety Data Sheet (SDS)

Skin Irritation:	Moderately irritating to skin.
Skin Sensitization:	Negative skin sensitizer
Eye Irritation:	Slight to moderate erythema observed in eyes in contact with material over 20 minutes to 3 hours.
Target Organs:	No data available.
Carcinogenicity:	Mice and rabbits exposed dermally to 0.02 mL of 10, 50 and 100% concentrations of DEET twice a week for 160 weeks had no significant differences in the number of tumors compared to controls.
Teratogenicity:	No data available.
Reproduction:	No data available.
Neurotoxicity:	No data available.
Mutagenicity:	No data available.
Additional Toxicity Information:	Skin irritation (rabbit): 50 mg; slightly irritating Eye Irritation (rabbit): 100 mg; moderately irritating

SECTION 12: Ecological information

12.1. Toxicity	Aquatic EC50 (48h) Daphnia = 56 - 100 ppm Aquatic LC50 (96h) Oncorhynchus mykiss (rainbow trout) = 71.25 ppm Aquatic LC50 (96h) Pimephales promelas (fathead minnow) = 110 mg/L Aquatic LC50 Colinus virginianus (Northern bobwhite quail) = 1375 mg/kg 48 HR EC50 DAPHNIA MAGNA 2 MG/L [STATIC] 24 HR EC50 DAPHNIA MAGNA 10800 mg/L 48 HR LC50 DAPHNIA MAGNA 9268 - 14221 mg/L 96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC]
12.2. Persistence and degradability	No data Not expected to bioaccumulate. Modeling suggests rapid degradation in the atmosphere; biodegradation data suggests moderate rate of biodegradation.
12.3. Bioaccumulative potential	No data
12.4. Mobility in soil	No data
12.5. Results of PBT and vPvB assessment	Not available.
12.6. Other adverse effects	Not predicted to exhibit significant toxicity to fish. Ecotoxicological data are for individual components of this mixture.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

US EPA Waste Number:	Not applicable
Waste Disposal:	Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

Safety Data Sheet (SDS)

SECTION 14: Transport information

14.1. UN number	Not applicable
14.2. UN proper shipping name	Chemicals, n.o.s. (DEET, ethanol)
14.3. Transport hazard class(es)	Not applicable
14.4. Packing group	Not applicable
14.5. Environmental hazards	Not applicable
14.6. Special precautions for user	Not available.

NA Emergency Guidebook Numbers: Not applicable **IMDG EMS:** Not applicable

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

OSHA Hazards: **Health:** Irritant (eye). **Physical:** Not applicable.

WHMIS Classification: Class D, Division 2, Subdivision B: Irritant.
Class B, Division 3: Combustible Liquid.

Chemical Inventory Lists:	**Status**
TSCA:	Present
EINECS:	231-791-2 205-149-7 200-578-6
Canada(DSL/NDSL):	DSL
Japan:	(3)-1677; (3)-1421; (3)-1321 (2)-202
Korea:	KE-35400 KE-10492 KE-13217
Australia:	Present
New Zealand:	Present
China:	Present
Philippines:	Present
Switzerland:	G-2482

New Zealand GHS Classification: Not classified by this country.

Japan GHS Classification: Not classified by this country.

Korea (MOL) GHS Classification: Not classified by this country.

Australia GHS Classification: Not classified by this country.

Taiwan GHS Classification: Not classified by this country.

Indonesia GHS Classification: Not classified by this country.

SARA 313: Not applicable

Other Regulatory Listings: This product is regulated under the PMRA in Canada. It must be used for purposes consistent with its labeling.
This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

15.2. Chemical safety assessment

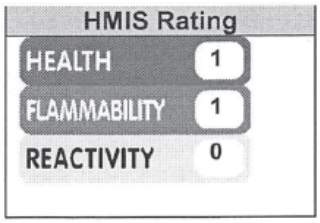
Not applicable.

Safety Data Sheet (SDS)

SECTION 16: Other information

Full text of R phrases in Section 3:

R22: Harmful if swallowed.
R36/38: Irritating to eyes and skin.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R11: Highly Flammable.



Legend of abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists.
CAS = Chemical Abstracts Service.
CERCLA = Comprehensive Environmental, Response, Compensation and Liability Act (1990).
CFR = Code of Federal Regulations.
DSL/NDSL = Domestic Substances List/Non-Domestic Substances List.
EC = European Community.
EEC = European Economic Community.
EINECS = European Inventory of Existing Commercial chemical Substances.
ELINCS = European List of Notified Chemical Substances.
EU = European Union.
GHS = Globally Harmonized System.
LC = Lethal concentration.
LD = Lethal dose.
MOL = Ministry of Labor.
NEMA = National Emergency Management Agency.
NFPA = National Fire Protection Association.
NIOSH = National Institute of Occupational Safety and Health.
NTP = National Toxicological Program.
OSHA = Occupational Safety and Health Administration
PEL = Permissible exposure limit.
RQ = Reportable quantity.
SARA = Superfund Amendments and Reauthorization Act of 1986.
TLV = Threshold limit value.
WHMIS = Workplace Hazardous Materials Information System.

Precautionary Statement: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

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Woman-Owned Business Enterprise - Founded 1971

Safety Data Sheet (SDS)

SECTION I - IDENTIFICATION

Product Name **Rainbow Telco & Power Wasp & Ant Spray with ETOC®**
Product Number **88500**
EPA Reg. No. 13283-31
Manufacturer/Supplier Rainbow Technology Corporation
261 Cahaba Valley Parkway, Pelham, AL 35124
800.637.6047 www.rainbowtech.net
Contact Person Larry Joe Steeley, Jr.
Emergency Information **CHEMTEL 1-800-255-3924** 813-248-0585 if located outside the U.S.

Revised Date: September 9, 2015
Preparation Date: August 13, 2015

SECTION II – HAZARDS IDENTIFICATION

CLASSIFICATION: Compressed Gas
Eye Irritant: Category 2b
Aspiration Hazard: Category 1
HAZARD STATEMENT(S): DANGER: Contains gas under pressure; May explode if heated. Causes eye irritation. May be fatal if swallowed and enters airways.
This product contains the following percentage of chemicals of unknown toxicity**:** 0%
PRECAUTIONARY STATEMENTS: Keep away from heat, sparks, open flames, and hot surfaces. -No smoking. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store in a well-ventilated place. Wash hands thoroughly after handling. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting. Store locked up. Dispose of contents and container in accordance with local, state, and national regulations.

SYMBOL:

HAZARDS NOT OTHERWISE CLASSIFIED: N/A

SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	PERCENT
Isoparaffinic Hydrocarbon	64742-47-8	60-100%
Carbon Dioxide	124-38-9	1-5%

SECTION IV - FIRST AID MEASURES

EYES: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
INGESTION: If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
INHALATION: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.
SKIN: Immediately wash with soap and water for 15 minutes. Remove contaminated clothing and shoes immediately. Seek medical attention if irritation develops.
ACUTE HEALTH HAZARDS: Eyes: redness, tearing, blurred vision
CHRONIC HEALTH HAZARDS: Concentrating vapors and inhaling material can lead to oxygen deprivation, loss of brain function and potential loss of life.
NOTE TO PHYSICIAN: There is no specific treatment regimen. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION V – FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, alcohol or alcohol-resistant foam or carbon dioxide. Water may be ineffective
UNSUITABLE EXTINGUISHING MEDIA: Water spray/stream.

Safety Data Sheet (SDS)

SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH approved Self Contained Breathing Apparatus with a full face piece operated in a positive pressure demand mode with full body protective clothing when fighting fires. Use water spray only to cool exposed containers.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep away from sparks, open flames, and hot surfaces. No smoking. Do not spray on an open flame or other ignition source.
HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon

SECTION VI – ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Refer to section VIII for proper Personal Protective Equipment.
SPILL: Clean up with non-combustible material like vermiculite, sand or earth. If many cans are opened remove ignition sources. Prevent spill from entering sewers, storm drains, and natural waterways.
WASTE DISPOSAL: Dispose of in accordance with federal, state, and local regulations. Containers may be hazardous when empty.
RCRA STATUS: Waste likely considered Non-hazardous under RCRA, however product should be fully characterized prior to disposal (40 CFR 261).

SECTION VII – HANDLING AND STORAGE

HANDLING AND STORAGE: Protect from sunlight. Store in a well ventilated place. Do not expose to temperatures exceeding 50°C/122°F. Pressurized container: Do not pierce or burn, even after use. Store locked up.
OTHER PRECAUTIONS: Keep out of the reach of children.
INCOMPATIBILITY: Some Plastics and strong oxidizers

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

HAZARDOUS INGREDIENT	OSHA PEL	ACGIH TLV
Isoparaffinic Hydrocarbon	400 ppm	400 ppm
Carbon Dioxide	5000 ppm	5000 ppm

ENGINEERING CONTROLS / VENTILATION: General ventilation adequate.
RESPIRATORY PROTECTION: Not required with normal use.
PERSONAL PROTECTIVE EQUIPMENT: Wear eye protection.
ADDITIONAL MEASURES: Wash hands thoroughly after handling.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear Aerosol
ODOR: Mild odor
ODOR THRESHOLD: N/D
BOILING POINT: 450°F
FREEZING POINT: N/D
FLAMMABILITY: Not considered a flammable aerosol or an extremely flammable aerosol by OSHA (29CFR 1910.1200)
FLASH POINT: > 200°F (93°C)
AUTOIGNITION TEMPERATURE: N/D
LOWER FLAMMABILITY LIMIT: N/A
UPPER FLAMMABILITY LIMIT: N/A
VAPOR PRESSURE (mm Hg): 90-100 psi
VAPOR DENSITY (AIR=1): <6
EVAPORATION RATE: < 1
SPECIFIC GRAVITY (H2O=1): 0.81
pH: N/A
SOLIDS (%): N/D
SOLUBILITY IN WATER: 0%
PARTITION COEFFICIENT: n-OCTANOL/WATER (K_{OW}): N/D
VOLATILITY INCLUDING WATER (%): 3%
VOLATILE ORGANIC COMPOUNDS (VOC): <1%
DIELECTRIC STRENGTH (Volts): 48,100
DECOMPOSITION TEMPERATURE: N/D

Safety Data Sheet (SDS)

VISCOSITY: N/D

SECTION X – STABILITY AND REACTIVITY DATA

REACTIVITY: None Known
CHEMICAL STABILITY: Stable
CONDITIONS TO AVOID: Temperatures greater than 122°F and sources of ignition.
INCOMPATIBILITY: Some Plastics and strong oxidizers
HAZARDOUS DECOMPOSITION OR BY-PRODUCT: Oxides of carbon
POSSIBLE HAZARDOUS REACTIONS: None Known

SECTION XI – TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: **Isoparaffinic Hydrocarbon** (64742-47-8) Eye Damage/Irritation: 2B; Aspiration Hazard: Category 1
ROUTES OF ENTRY: Ingestion, Inhalation, Skin
EYES: Causes irritation, redness, tearing.
INGESTION: may causes nausea, diarrhea, vomiting
INHALATION: May cause dizziness. Excessive exposure may lead to oxygen deprivation and unconsciousness.
SKIN: May cause mild irritation, localized defatting.
MEDICAL CONDITION AGGRAVATED: Excessive exposure will aggravate respiratroy cardiovascular or pulmonary illnesses.
ACUTE HEALTH HAZARDS: Eyes: redness, tearing, blurred vision
CHRONIC HEALTH HAZARDS: Concentrating vapors and inhaling material can lead to oxygen deprivation, loss of brain function and potential loss of life.
CARCINOGENICITY: **OSHA:** No **ACGIH:** No **NTP:** No **IARC:** No **OTHER:** N/A

SECTION XII – ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: This product is extremely toxic to aquatic organisms, including fish and invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.
BIODEGRADABILITY: Component or components of this product are not biodegradable.
BIOACCUMULATION: Components in this mixture can bioaccumulate in aquatic organisms.
SOIL MOBILITY: This product is mobile in soil.
OTHER ECOLOGICAL HAZARDS: This material is toxic to aquatic life.

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Dispose of in accordance with federal, state, and local regulations. Containers may be hazardous when empty.
RCRA STATUS: Waste likely considered Non-hazardous under RCRA, however product should be fully characterized prior to disposal (40 CFR 261).

SECTION XIV - TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Aerosols, Ltd. Qty.
HAZARD CLASS/DIVISION: 2.2
UN/NA NUMBER: UN 1950
PACKAGING GROUP: N/A

AIR SHIPMENT
PROPER SHIPPING NAME: Aerosols, Ltd. Qty.
HAZARD CLASS/DIVISION: 2.2
UN/NA NUMBER: UN 1950

SHIPPING BY WATER:
VESSEL (IMO/IMDG)
PROPER SHIPPING NAME: Aerosols, Ltd. Qty.

Safety Data Sheet (SDS)

HAZARD CLASS/DIVISION: 2.2
UN/NA NUMBER: UN 1950
ENVIRONMENTAL HAZARDS WATER: Marine Pollutant

SECTION XV - REGULATORY INFORMATION

TSCA STATUS: All Chemicals are listed or exempt.
CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): None
SARA 311/312 HAZARD CATEGORIES: None
SARA 313 REPORTABLE INGREDIENTS: None
STATE REGULATIONS: California Proposition 65: None
INTERNATIONAL REGULATIONS: All components are listed or exempted.
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification crieteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
CAUTION: Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin, or clothing. Thoroughly wash with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated contact may cause allergic reactions in some individuals.
Flammable. Contents under pressure. Keep away from heat, sparks and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
EPA Reg. No. 13283-31 EPA Est. 44446-TX-1

NFPA HEALTH:	2	**HMIS HEALTH:**	2
NFPA FLAMMABILITY:	1	**HMIS FLAMMABILITY:**	1
NFPA REACTIVITY:	1	**HMIS REACTIVITY:**	1
NFPA OTHER:	None	**HMIS PROTECTION:**	A

SECTION XVI - ADDTIONAL INFORMATION

N/A = Not Applicable; N/D = Not Determined

DISCLAIMER: To the best of our knowledge, information contained herein is accurate. However there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.

SAFETY DATA SHEET

Issuing Date: 03-May-2016 **Revision Date:** 03-May-2016 **Version** 1

1. IDENTIFICATION

Product Name Febreze Air Effects Hawaiian Aloha

Product ID: 90932105_RET_NG

Product Type: Finished Product - Consumer (Retail) Use Only

Recommended Use Air freshener.

Manufacturer

PROCTER & GAMBLE - Fabric and Home Care Division
Ivorydale Technical Centre
5289 Spring Grove Avenue
Cincinnati, Ohio 45217-1087 USA

Procter & Gamble Inc.
P.O. Box 355, Station A
Toronto, ON M5W 1C5
1-800-331-3774

E-mail Address pgsds.im@pg.com

Emergency Telephone

Transportation (24 HR)
CHEMTREC - 1-800-424-9300
(U.S./ Canada) or 1-703-527-3887
Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Gases Under Pressure Compressed Gas

Signal Word WARNING

Hazard Statements

Contains gas under pressure; may explode if heated

Hazard pictograms

Precautionary Statements Pressurized container: Do not pierce or burn, even after use

Precautionary Statements - Response None

Precautionary Statements - Storage None

Precautionary Statements - Disposal None

Hazards not otherwise classified (HNOC) None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Ethanol	Ethanol	No	64-17-5	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO_2, alcohol-resistant foam or water spray. Dry chemical. Alcohol-resistant foam.

Unsuitable Extinguishing Media None.

Special hazard Containers may explode when heated.

Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific hazards arising from the chemical	Containers may explode when heated.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Do not get in eyes, on skin, or on clothing.
Advice for emergency responders	Use personal protective equipment as required.
Environmental precautions	Keep out of waterways Do not discharge product into natural waters without pre-treatment or adequate dilution

Methods and materials for containment and cleaning up

Methods for containment	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not puncture or incinerate cans.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible products	None known.
Aerosol Classification Level	1

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines	Exposure guidelines are not relevant when product is used as intended in a household setting.

Exposure controls

Engineering Measures	**Distribution, Workplace and Household Settings:** Ensure adequate ventilation **Product Manufacturing Plant (needed at Product-Producing Plant ONLY):** Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of inadequate ventilation wear respiratory protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	aerosols
Appearance	Clear to light yellow liquid
Odor	Perfume
Odor threshold	No information available

Property	Values	Note
pH value	4.5	
Melting/freezing point	No information available	
Boiling point/boiling range	83 °C / 181 °F	
Flash point	50 °C / 122 °F	Product is an aqueous solution containing <= 24% alcohol and> 50% water
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	0.987-0.999	
Water solubility	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.
Viscosity of Product	No information available	
VOC Content (%)	Products comply with US state and federal regulations for VOC content in consumer products.	

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.
Conditions to Avoid	None under normal processing.
Materials to avoid	None in particular.
Hazardous Decomposition Products	None under normal use conditions.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.
Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	No known effect.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	No known effect.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products	Aerosol cans, when disposed as waste, are regulated as D003 reactive hazardous waste in some States because of their potential to explode when heated. Check with your State environmental agency for guidance.

Contaminated packaging Pressurized container: Do not pierce or burn, even after use.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT

UN no	UN1950
UN Proper shipping name	Aerosols
Description	UN1950, Aerosols, 2.2
Hazard Class	2.2
Emergency Response Guide Number	126

The shipper is responsible for identifying any exemptions, including Limited Quantity, that may apply based on package size

IMDG

UN Number	UN1950
UN Proper shipping name	Aerosols
Description	UN1950, Aerosols, 2
Transport hazard class(es)	2
Special precautions for user	63,190, 277, 327, 344, 959
EmS-No	F-D, S-U
IMDG Comment	The shipper is responsible for identifying any exemptions, including Limited Quantity, that may apply based on package size

IATA

UN no	UN1950
UN Proper shipping name	Aerosols, non-flammable
Description	UN1950, Aerosols, non-flammable, 2.2
Hazard Class	2.2
ERG Code	2L
IATA comment	The shipper is responsible for identifying any exemptions, including Limited Quantity, that may apply based on package size

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Not applicable for consumer use

CERCLA
Not applicable for consumer use.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
Not applicable for consumer use

Clean Water Act
Not applicable for consumer use.

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)
Not applicable for consumer use.

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
United States Toxic Substances Control Act Section 8(b) Inventory (TSCA)
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 03-May-2016
Revision Date: 03-May-2016
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: IC LSPR 12PK FLUORESCENT RED MARKING

Revision Date: 8/7/2018

Product Identifier: 1662838

Supercedes Date: 6/28/2018

Recommended Use: Marking Paint/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Rust-Oleum Canada (ROCA)
200 Confederation Parkway
Concord, ON L4K 4T8
Canada
Emergency Phone: 800-387-3625

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
47% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	For specific treatment see label

GHS SDS PRECAUTIONARY STATEMENTS

P363	Wash contaminated clothing before reuse.

3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.%	GHS Symbols	GHS Statements
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	19	GHS08	H304
Propane	74-98-6	17	GHS04	H280
Hydrous Magnesium Silicate	14807-96-6	8.5	Not Available	Not Available
n-Butane	106-97-8	8.0	GHS04	H280
Acetone	67-64-1	7.1	GHS02-GHS07	H225-319-332-336
n-Butyl Acetate	123-86-4	3.6	GHS02-GHS07	H226-336

Hydrotreated Light Distillate	64742-47-8	2.9	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	1.5	GHS02-GHS07	H226-315-319-332
Stoddard Solvent	8052-41-3	0.7	GHS08	H304-372
Ethylbenzene	100-41-4	0.4	GHS02-GHS07-GHS08	H225-304-332-351-373
Methyl ethyl ketoxime	96-29-7	0.1	GHS05-GHS06-GHS08	H302-312-317-318-331-351

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat due to buildup of steam. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Contents under pressure. Do not expose to heat or store above 120 ° F. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	20.0	N.E.	N.E.	N.E.	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Hydrous Magnesium Silicate	14807-96-6	10.0	2 mg/m3	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Acetone	67-64-1	10.0	250 ppm	500 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	5.0	50 ppm	150 ppm	150 ppm	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Methyl ethyl ketoxime	96-29-7	1.0	10 ppm	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application. Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.870	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation. May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
14807-96-6	Hydrous Magnesium Silicate	6000	N.E.	30
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
96-29-7	Methyl ethyl ketoxime	930 mg/kg Rat	1100 mg/kg Rabbit	>4.8 mg/L Rat

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems. Do not incinerate closed containers. This product as supplied is a USEPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Gas under pressure, Carcinogenicity, Respiratory or Skin Sensitization

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

Maximum Incremental Reactivity 0.67

SDS REVISION DATE: 8/7/2018

REASON FOR REVISION: Revision Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

Issue date 20-May-2019 **Version** 2

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product name CHAMPION SPRAYON GLASS CLEANER WITH AMMONIA
Chemical name 7-4452-1

Other means of identification

Product code FG 438-5151-7
Synonyms Glass Cleaner

Recommended use of the chemical and restrictions on use

Recommended Use Glass surfaces.
Uses advised against DO NOT USE ON FLOORS

Details of the supplier of the safety data sheet

Supplier Address
Chase Products Co.
2727 Gardner Road
Broadview, IL 60155
708-865-1000

Manufacturer Address
Chase Products Co.
2727 Gardner Road
Broadview, IL 60155
708-865-1000

Emergency Telephone Number

Company Phone Number 708-865-1000
24 Hour Emergency Phone Number 1-800-255-3924
Emergency telephone ChemTel 1-800-255-3924

2. Hazards Identification

Classification

Acute toxicity - Inhalation (Gases)	Category 4
Gases Under Pressure	liquefied gas

Label Elements

EMERGENCY OVERVIEW

Warning

hazard statements
HARMFUL IF INHALED
Contains gas under pressure; may explode if heated

Appearance Clear liquid that will be aerosolized. **Physical State** Aerosol **Odor** Perfumed.

Precautionary Statements - Prevention
Avoid breathing fumes, mist, vapors or spray.

Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell

Precautionary Statements - Storage
Protect from sunlight. Store in a well-ventilated place

Hazards not otherwise classified (HNOC)
Other Information
• Causes mild skin irritation
• Harmful to aquatic life
No information available

3. Composition/information on Ingredients

Common Name Glass Cleaner.
Synonyms Glass Cleaner.
Chemical Family MIXTURES.
Formula 7-4452-1
Chemical nature Aqueous solution of organic solvent.

Chemical name	CAS No	weight-%	Trade secret
Water	7732-18-5	90-95	*
2-Butoxyethanol	111-76-2	1-5	*
N-Butane	106-97-8	1-5	*
Ammonium hydroxide	1336-21-6	<1	*

Chemical Additions Hazardous components according to OSHA, are listed when present at 1% or greater. Carcinoges are listed when present at 0.1% or greater.

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

Eye Contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation If overcome by vapor, move person to fresh air. Restore respiration if necessary. Get medical attention if injury develops.

Ingestion Ingestion from an aerosol product is unlikely to occur.

Most important symptoms and effects, both acute and delayed

Symptoms Acute, Deliberate inhalation of concentrated vapor or mist may cause headaches. Prolonged and repeated contact with the eyes may cause mild irritation. Chronic: 2-butoxyethanol may cause hemolysis of the blood cells leading to possible liver and kidney damage.

Indication of any immediate medical attention and special treatment needed

Note to physicians None needed.

5. Fire-fighting measures

Suitable extinguishing media
Dry chemical, CO2 or water spray.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
This product is under pressure. Water spray may be used to cool cans in the vicinity of fire or excessive heat to prevent the explosion of the cans.

Hazardous combustion products Thermal decomposition may release carbon monoxide and carbon dioxide.

Explosion data
Sensitivity to Mechanical Impact Contents under pressure, keep away from heat and open flame.
Sensitivity to Static Discharge Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Use with adequate general or local exhaust ventilation.

For emergency responders Remove all sources of ignition.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

Methods for cleaning up Clean contaminated surface thoroughly.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Do not deliberately inhale vapor or spray mist. Avoid getting spray into eyes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in a cool, dry place away from heat and open flame. Keep out of reach of children.
AEROSOL STORAGE LEVEL I (NFPA-30B) .

Incompatible Materials Avoid heat, open flame and contact with strong oxidizers.

8. Exposure Controls/Personal Protection

Control parameters

Exposure guidelines See occupational exposure limits listed below.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m³ (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m³
N-Butane 106-97-8	STEL: 1000 ppm explosion hazard	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m³	IDLH: 1600 ppm TWA: 800 ppm TWA: 1900 mg/m³

Appropriate engineering controls

Engineering controls Use with adequate general or local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face Protection Conventional eyeglasses to guard against splashing.

Skin and Body Protection Household type gloves, if desired.

Respiratory protection None required if used in a well-ventilated area .

General hygiene considerations Wash hands thoroughly after handling.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State	Aerosol		
Appearance	Clear liquid that will be aerosolized.	**Odor**	Perfumed.
Color	clear	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	10.3 +/- 0.5	No information available
Melting point/freezing point	Not applicable	No information available
Boiling point/boiling range	Water 212 °F/100 °C	No information available
Flash Point	Not Available. This is an aerosol product for which Flame Projection is 0 inches. Temperatures above 120 °F may cause cans to burst.	No information available
Evaporation Rate	Faster than butyl acetate	No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air		No information available
Upper flammability limits	Not available	
Lower Flammability Limit	Not available	
Vapor pressure		No information available
Vapor Density		No information available
Relative Density	0.99 - 1.1 concentrate	No information available
Water solubility		Soluble in water
Solubility in other solvents		No information available
Partition coefficient		No information available
Autoignition Temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available

VOC content (%) 7.99%
Density 8.25 - 9.16 lb/gal
Bulk Density No information available

10. Stability and Reactivity

Reactivity
Not applicable Not applicable

Chemical stability
Stable.

Possibility of hazardous reactions
Temperatures above 130 °F may cause cans to burst with force.

hazardous polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Temperatures above 122 °F (50 °C).

Incompatible Materials
Avoid heat, open flame and contact with strong oxidizers.

Hazardous decomposition products
Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.

11. Toxicological Information

Information on likely routes of exposure

Product Information Primary routes of entry: Eye contact, skin contact, inhalation, ingestion (possible, but consider unlikely).

Inhalation Deliberate inhalation of concentrated vapor or mist may cause headache, dizziness and nausea.

Eye Contact Can cause irritation after contact with eyes.

Skin contact May cause skin irritation after contact with skin. 2-Butoxyethanol penetrates skin readily. Frequent or wide spread contact may results on skin absorption of potentially harmful amounts.

Ingestion This is an aerosol product, ingestion is unlikely to occur. 2-Butoxyethanol may cause red blood cell hemolysis and possible liver and kidney damage.

Chemical name	Oral LD50	dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h = 486 ppm (Rat) 4 h
N-Butane 106-97-8	-	-	= 658 g/m³ (Rat) 4 h
Ammonium hydroxide 1336-21-6	= 350 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms Deliberate inhalation of concentrated vapor or mist may cause headache, dizziness and nausea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation after contact with skin. 2-Butoxyethanol penetrates skin readily. Frequent or wide spread contact may results on skin absorption of potentially harmful amounts.

Serious eye damage/eye irritation Can cause irritation after contact with the eyes.

corrosivity Not applicable.

sensitization No a skin sensitizer.

Germ cell mutagenicity No information available.

Carcinogenicity Not known chronic effects based on available data. None of the ingredients present in excess of 0.1% are listed as carcinogenic by NTP, IARC or OSHA.

Chemical name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol 111-76-2	A3	Group 3		

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration Hazard Deliberate inhalation of concentrated vapor or mist may cause headache, dizziness and nausea.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 9691 mg/kg

ATEmix (dermal) 22680 mg/kg

ATEmix (inhalation-gas) 14417 mg/l

ATEmix (inhalation-dust/mist) 30.9 mg/l

ATEmix (inhalation-vapor) 7089 mg/l

12. Ecological Information

ecotoxicity

6.1 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
2-Butoxyethanol 111-76-2		1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50		1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50
Ammonium hydroxide 1336-21-6		8.2: 96 h Pimephales promelas mg/L LC50		0.66: 48 h water flea mg/L EC50 0.66: 48 h Daphnia pulex mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Chemical name	Partition coefficient
2-Butoxyethanol 111-76-2	0.81
N-Butane 106-97-8	2.89

Other adverse effects No information available

13. Disposal Considerations

Waste treatment methods

Disposal of wastes Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Pressurized container: Do not pierce or burn, even after use. Do not puncture or incinerate container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions.

Chemical name	California Hazardous Waste Status
Ammonium hydroxide 1336-21-6	Toxic Corrosive

14. Transport Information

DOT

UN/ID no	Limited Quantity
Proper Shipping Name	Consumer Commodity
Hazard Class	ORM-D

IATA

UN/ID no	UN1950
Proper Shipping Name	Aerosols, flammable
Hazard Class	2.1

IMDG

UN/ID no	UN1950
Proper Shipping Name	Aerosols, flammable
Hazard Class	2.1
Marine pollutant	This product does not contain marine pollutants.

15. Regulatory information

International Inventories

TSCA All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Subtances Control Act (TSCA) Chemical Substance Inventory.

DSL All ingredients are listed or are excluded from listing on the DSL.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

This product contains the following toxic chemicals (above the de minimis level) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372. This information must be included in all SDSs that are copied and distributed for this material.

Chemical name	CAS No	weight-%	SARA 313 - Threshold Values %
2-Butoxyethanol - 111-76-2	111-76-2	1-5	1.0
Ammonium hydroxide - 1336-21-6	1336-21-6	<1	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	No
Fire Hazard	No

Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium hydroxide 1336-21-6	1000 lb			X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium hydroxide 1336-21-6	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5			X
2-Butoxyethanol 111-76-2	X	X	X
N-Butane 106-97-8	X	X	X
Ammonium hydroxide 1336-21-6	X	X	X

U.S. EPA Label information
EPA Pesticide registration number Not applicable

16. Other information

NFPA	**Health Hazards** 1	**Flammability** 1	**Instability** 1	**Physical and chemical properties** Not applicable
HMIS	**Health Hazards** 1	**Flammability** 2	**Physical hazards** 1	**Personal Protection** B - Eyes and hands protection

Issue date 20-May-2019
Revision note
This SDS supersedes a previous SDS dated January 21, 2015.
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Material Safety Data Sheet

Acetylene

In Case of Emergency: Chemtrec 800-424-9300

Section 1: Product and Company Identification

Gas and Supply
125 Thruway Park
Broussard, LA 70518
877-441-7311
Fax: 337-839-8235
www.gasandsupply.com

Product Code: Acetylene

Chemical Substance	Chemical Family	Trade Names
ACETYLENE, DISSOLVED	hydrocarbons, aliphatic	ACETYLENE; ETHYNE; WELDING GAS; ACETYLEN; ETHINE; NARCYLEN; VINYLENE; UN 1001; C2H2

Section 2: Hazards Identification

Description	Main Health Hazard
Colorless, sweet odor **May explode when heated. Flammable gas. May cause flash fire. Electrostatic charges may be generated by flow, agitation, etc. May polymerize. Containers may rupture or explode.**	Central nervous system depression, difficulty breathing, asphyxiant

Likely Routes of Exposure:

Inhalation	Ingestion	Eye	Skin	Health Effects	Target Organs	Medical Condition Aggravated by -
Nausea, vomiting, chest pain, wheezing, headache, drowsiness, dizziness, loss of coordination, bluish skin color, suffocation, lung congestion, coma	Ingestion of a gas is unlikely	No information on significant adverse effects	Rash	Central nervous system depression, difficulty breathing, asphyxiant	Central nervous system	Pre-existing conditions of the lungs, and upper respiratory tract.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition/Information on Ingredients

CAS #
74-86-2

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Gas: Not applicable. Liquid: Wash exposed skin with soap and water.	Gas: Not applicable. Liquid: Flush eyes with plenty of water.	Not applicable.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

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Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray.	Oxides of carbon	▪ Respiratory protection may be needed for frequent or heavy exposure. ▪ Any self-contained breathing apparatus with a full facepiece.

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.

Methods for Cleanup	Other Information
Evacuate, stop leak if possible. Remove sources of ignition.	None

Section 7: Handling and Storage

Handling	Storage
Avoid heat, flames, sparks and other sources of ignition. Grounding and bonding required. Secure to prevent tipping. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.	Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Keep separated from incompatible substances. Store in a cool, dry place. Store in a well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
ACETYLENE, DISSOVED: ACETYLENE: ACGIH (simple asphyxiant) 2500 ppm (2662 mg/m3) NIOSH recommended ceiling

Engineering Controls

No specific controls are needed.

Eye Protection	Skin Protection	Respiratory Protection
Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Colorless	Colorless	N/A	Liquefied gas	Sweet odor	N/A

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Flammable gas. Can be ignited at all normal temperatures. A flash point of 0 F (-18 C) (CC) has been reported.		2691.53 (log = 3.44) (estimated from water solubility)	581 F (305 C)	81%; 100% if there is a substantial energy ignition source, and under certain conditions of pressure, container size and shape.‘	0.025

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Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
-103 F (-75 C) @ 170 kPa abs (24.7 psi abs) or 69 kPa gage (10 psi gage)	Not available	760 mmHg @ -84 C	0.9	Not applicable	0.94% @ 25 C	Not applicable	240 mg/m3 (226 ppm) (detection) (4); 657 mg/m3 (620 ppm) (not specified) (8) 1300-2750 mg/m3 (1222-2585 ppm) (not specified)	Not applicable	0.010 cP @ 20 C

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
26.04	H-C-C-H	1.1747 g/L @ 0 C	Not available	Not available	Not applicable	Soluble: Acetone, benzene, chloroform, ether

Section 10: Stability and Reactivity

Stabilty	Conditions to Avoid	Incompatible Materials
May decompose violently on heating. May explode when heated.	May decompose violently on heating. May explode when heated.	Metals, halogens, oxidizing materials, metal carbide, reducing agents, halo carbons BRASS. CALCIUM HYPOCHLORITE, COPPER, MERCURY AND SILVER SALTS, HALOGENS, HEAVY METALS, HYDRIDES, LIQUID NITROGEN, NITRIC ACID , OXYGEN, OZONE, PERCHLORIC ACID, POTASSIUM

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Hydrogen	Polymerizes with evolution of heat. Avoid contact with curing agents, accelerators, and/or initiators.

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Not established	Not established	Nausea, vomiting, chest pain, wheezing, headache, drowsiness, dizziness, loss of coordination, bluish skin color, suffocation, lung congestion, coma

Eye Irritation	Skin Irritation	Sensitization
No information on significant adverse effects	Rash	Central nervous system depression, difficulty breathing, asphyxiant

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not established	Not established	Not established	No data

Section 12: Ecological Information

Fate and Transport

Ecotoxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: Not available **Invertibrate toxicity: Not available** **Algal toxicity: Not available** **Phyto toxicity: Not available**	Relatively non-persistent in the environment. Highly volatile from water.	Accumulates very little in the bodies of living organisms.	Not expected to leach through the soil or the sediment.

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Other toxicity: Not available			

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. D003.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Acetylene, dissolved	UN1001	2.1	Not applicable	2.1	Forbidden	15 kg	N/A

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Acetylene, dissolved	UN1001	2.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
Not regulated.	Not regulated.	Not regulated.

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	No	Yes	Yes	Yes

SARA 372.65

Not regulated.

OSHA Process Safety

Not regulated.

State Regulations

CA Proposition 65
Not regulated.

Canadian Regulations

WHMIS Classification
A, B1

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

NFPA Rating
HEALTH=1 FIRE=4 REACTIVITY=3

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

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Safety Data Sheet
Acetylene

In Case of Emergency: Chemtrec 800-424-9300

Section 1: Product and Company Identification

Gas and Supply
125 Thruway Park
Broussard, LA 70518
877-441-7311
Fax: 337-839-8235
www.gasandsupply.com

Product Code: Acetylene
Synonyms: Ethyne; Ethine; Narcylen; C2H2; Acetylen; UN 1001; Vinylene
Recommended Use: Synthetic/Analytical chemistry

Section 2: Hazards Identification

Danger

Hazard Classification:
FLAMMABLE GASES - Category 1
GASES UNDER PRESSURE - Compressed gas

Hazard Statements:
Extremely flammable gas.
May form explosive mixtures with air.
Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary Statements
P202 - Do not handle until all safety precautions have been read and understood
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, face protection, protective gloves, protective clothing
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P403 - Store in a well-ventilated place
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)
CGA-PG05 - Use a back flow preventive device in the piping
CGA-PG06 - Close valve after each use and when empty
CGA-PG10 - Use only with equipment rated for cylinder pressure
CGA-PG14 - Approach suspected leak area with caution
CGA-PG21 - Open valve slowly

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Prevention:
Never put cylinders into unventilated areas of passenger vehicles. Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

Response:
Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all. ignition sources if safe to do so.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight.
Store locked up.

Disposal:
Dispose of contents and/or container in accordance with applicable regulations.

Section 3: Composition/Information on Ingredients

CAS #
74-86-2

Chemical Substance	Chemical Family	Trade Names
ACETYLENE, DISSOLVED	hydrocarbons, aliphatic	ACETYLENE; ETHYNE; WELDING GAS; ACETYLEN; ETHINE; NARCYLEN; VINYLENE; UN 1001; C2H2

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Gas: Not applicable. Liquid: Wash exposed skin with soap and water.	Gas: Not applicable. Liquid: Flush eyes with plenty of water.	Ingestion is not considered a potential route of exposure	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray.	Oxides of carbon	▪ Respiratory protection may be needed for frequent or heavy exposure. ▪ Any self-contained breathing apparatus with a full facepiece.

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment

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Personal Precautions	Environmental Precautions	Methods for Containment
Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.

Methods for Cleanup	Other Information
Evacuate, stop leak if possible. Remove sources of ignition.	None

Section 7: Handling and Storage

Handling	Storage
Avoid heat, flames, sparks and other sources of ignition. Grounding and bonding required. Secure to prevent tipping. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.	Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Keep separated from incompatible substances. Store in a cool, dry place. Store in a well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
ACETYLENE, DISSOVED: ACETYLENE: ACGIH (simple asphyxiant) 2500 ppm (2662 mg/m3) NIOSH recommended ceiling

Engineering Controls

Handle only in fully enclosed systems or with adequate ventilation.

Eye Protection	Skin Protection	Respiratory Protection
Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Colorless	Colorless	N/A	Liquefied gas	Sweet odor	N/A

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Flammable gas. Can be ignited at all normal temperatures. A flash point of 0 F (-18 C) (CC) has been reported.		2691.53 (log = 3.44) (estimated from water solubility)	581 F (305 C)	81%; 100% if there is a substantial energy ignition source, and under certain conditions of pressure, container size and shape.‘	0.025

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity

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Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
-103 F (-75 C) @ 170 kPa abs (24.7 psi abs) or 69 kPa gage (10 psi gage)	Not available	760 mmHg @ -84 C	0.9 (Air=1)	Not applicable	0.94% @ 25 C	Not applicable	240 mg/m3 (226 ppm) (detection) (4); 657 mg/m3 (620 ppm) (not specified) (8) 1300-2750 mg/m3 (1222-2585 ppm) (not specified)	Not applicable	0.010 cP @ 20 C

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
26.04	H-C-C-H	1.1747 g/L @ 0 C	Not available	Not available	Not applicable	Soluble: Acetone, benzene, chloroform, ether

Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
May decompose violently on heating. May explode when heated.	May decompose violently on heating. May explode when heated.	Metals, halogens, oxidizing materials, metal carbide, reducing agents, halo carbons BRASS. CALCIUM HYPOCHLORITE, COPPER, MERCURY AND SILVER SALTS, HALOGENS, HEAVY METALS, HYDRIDES, LIQUID NITROGEN, NITRIC ACID , OXYGEN, OZONE, PERCHLORIC ACID, POTASSIUM

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Hydrogen	Polymerizes with evolution of heat. Avoid contact with curing agents, accelerators, and/or initiators.

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Not established	Not established	Nausea, vomiting, chest pain, wheezing, headache, drowsiness, dizziness, loss of coordination, bluish skin color, suffocation, lung congestion, coma

Eye Irritation	Skin Irritation	Sensitization
No information on significant adverse effects	Rash	Central nervous system depression, difficulty breathing, asphyxiant

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not established	Not established	Not established	No data

Section 12: Ecological Information

Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: Not available Invertibrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not	Relatively non-persistent in the environment. Highly volatile from water.	Accumulates very little in the bodies of living organisms.	Not expected to leach through the soil or the sediment.

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available			

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. D003.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Acetylene, dissolved	UN1001	2.1	Not applicable	2.1	Forbidden	15 kg	N/A

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Acetylene, dissolved	UN1001	2.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
Not regulated.	Not regulated.	Not regulated.

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	No	Yes	Yes	Yes

SARA 372.65

Not regulated.

OSHA Process Safety

Not regulated.

State Regulations

CA Proposition 65
Not regulated.

Canadian Regulations

WHMIS Classification
A, B1

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

NFPA Rating
HEALTH=1 FIRE=4 REACTIVITY=3

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

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SAFETY DATA SHEET
ADVANTAGE ® AW-46 HYDRAULIC OIL

ADVANCED LUBRICATION SPECIALTIES
ISO 9001:2015 Registered

Section 1 - Identification

1.1 Product Identifiers

Product Name : ADVANTAGE ® AW-46 HYDRAULIC OIL
Product Code(s) : 435-000, 435-055, 435-005, 435-330, 435-275

1.2 Product Usage

Recommended Usage : Antiwear Hydraulic Oil
Restricted Usage : Not Intended for any other usage

1.3 Emergency Support

Emergency Support : CHEMTREC
United States/Canada +1(800) 424-9300

1.4 Supplier Information

Advanced Lubrication Specialties
420 Imperial Court
Bensalem, PA 19020
United States

Phone : 215-214-2114
Fax : 215-214-2118
Email : sds@advancedlubes.com
technical@advancedlubes.com
sales@advancedlubes.com

Section 2 - Hazards Identification

2.1 Classification of the Substance or the Mixture

GHS Rating(s) : **No Classified Hazards**
Signal Word : **Not Applicable**

2.2 Label Elements

No Classified Hazards.

Precautionary	**: P201**	Obtain Special Instructions Before Use.
	P202	Do Not Handle Until All Safety Precautions Are Understood.
	P281	Use Personal Protective Equipment As Required.
Response	**: P308**	If Exposed Or Concerned: Get Medical Advice/attention.
Storage	**: P405**	Store Locked Up.
Disposal	**: P501**	Dispose Of Container According To Regional Regulations.

2.3 Other Hazards

Section 3 - Composition / Information on Ingredients

3.1 Substance Details

Chemical Name	CAS #	%Weight
LUBRICANT BASE OIL (PETROLEUM)	64742-54-7	85.0
RESIDUAL OILS, PETROLEUM, SOLVENT-DEWAXED	64742-62-7	14.0
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC	64742-55-8	0.1

INERT The remaining percentage are not listed as Physical or Health Hazards (29 CFR 1910.1200) 0.9

Products containing mineral oil with less than 3% DMSO extract as measured by IP-346.

Section 4 - First Aid Measures

4.1 First Aid Measures

Eye Contact : Immediately flush eyes with plenty of water occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for atleast 20 minutes. Get Medical Attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Maintain an open airway. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. get medical attention if symptoms occur.

4.2 Symptoms & Effects

To Physician : Treat symptomatically. Contact poison specialist if product has been ingested.

Specific Treatment : No Specific Treatment.

4.3 Medical Attention

Protection of First Aiders : No action should be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Note To Doctor : Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach contents is necessary, use method least likely to cause aspiration.

Section 5 - Fire Fighting

5.1 Extinguishing Media

Suitable Media
Unsuitable Media : CO_2, Dry chemical, or Foam. Water can be used to cool and protect product. Do not use water jet as an extinguisher, it will spread the fire.

Specific hazards arising from this product : When heated, hazardous gases may be released including: sulfur dioxide. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. This material creates a special hazard because it floats on water. This material is harmful to aquatic life. Any fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

5.3 Firefighters Advice

Special protective equipment : Fire Equipment Information: Fire-fighters should wear appriovirate protective equipment and sel contained breathing apparatus(SCBA) with a full face -piece operated in positive pressure mode.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment

General Measures : No health affects expect from the cleanup of this material if contact can be avoided. Follow personal protect equipment recommendations found in section 8 of this SDS.

6.2 Environmental Precautions

Non-Emergency Personnel : Avoid dispersal of spilled material and runoff and contact with soil , waterways, drains and sewers. Inform authorities if the product has caused environmental pollution Water Polluting Material may be harmful to the environment if released in large quantities.

6.3 Materials & Methods to Contain and Cleanup

Reference Section 8 : Follow all protective equipment recommendations provided in Section 8.

Spill Control Measures : Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Dispose of according to Federal, State, Local, or Provincial regulations. Used fluid should be disposed of at a recycling center.

Containment and Cleanup : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillage's with noncombustible, absorbent material e.g. sand earth vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via licensed waste disposal contractor. Contaminated absorbent material may pose the same threat hazard as the spilled product.

Section 7 - Handling & Storage

7.1 Safe Handling

Personal Protective Equipment : Put on appropriate personal protective equipment (see section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, keep lid tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7.2 Safe Storage

Required conditions : Odorous and toxic fumes may form from the decomposition of this product if stored at temperatures in excess of 113 deg F (45 deg C) for extended periods of time or if heat sources in excess of 250 deg F (121 deg C) are used. Store away from incompatible materials. See section 10 for incompatible materials.

7.3 Specific End Use

Designed Purpose : This product is designed for use as a Antiwear Hydraulic Oil

Section 8 - Exposure Control

8.1 United States Exposure Limits

CAS	Chemical Name	Exposure Limits	Source
64742-55-8	Distillates, petroleum, hydrotreated light	5mg/m3	NLM_CI
64742-54-7	Distillates, petroleum, hydrotreated heavy	5mg/m3	IUCLID

8.2 Exposure Controls

Engineering Controls : Material should be handled in enclosed vessels and equipment, in which case general room ventilation should be sufficient. Local exhaust ventilation should be used at points where dust, mist, vapors or gases can escape into the room air. No special requirements under ordinary conditions of use and with adequate ventilation.

Enviromental Exposure Controls : General room ventilation should be satisfactory. Local exhaust ventilation may be necessary if misting is generated.

Hygeine Measures : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Eye / Face Protection : If contact is likely, safety glasses with side shields are recommended.

Skin / Hand Protection : Butyl rubber. Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Use caution when opening manway covers of storage and transportation containers. 3-nitroaniline crystals may be present on the interior surface of these openings. 3-nitroaniline is toxic by dermal exposure.

Respiratory Protection : Use a properly fitted air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this a necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9 - Physical & Chemical Properties

9.1 Information On Basic Physical and Chemical Properties

Physical state	: Liquid
Color	: B&C
Odor	: Characteristic of Petroleum
Odor threshold	: No Data Available
pH	: No Data Available
Freezing Point	: No Data Available
Boiling Point / Range	: No Data Available
Flash Point COC	: 240C
Evaporation rate:	: No Data Available
Upper Explosive Limits (% air)	: No Data Available
Lower Explosive Limits (% air)	: No Data Available
Flammability (solid, gas)	: Not Applicable
Vapor pressure	: <1 mm Hg
Vapor density (air=1)	: > 1
Relative Density	: 0.87
Auto-ignition temperature	: Not Determined
Decomposition temperature	: Not Determined
Solubility in water	: Negligible, 0-1%
Partition coefficient, n-octanol/water	: No Data Available
Viscosity @ 40C	: 44 cst
Viscosity @ 100C	: 7 cst

Section 10 - Stability & Reactivity

10.1 Material Analysis

Reactivity	: No Data Available
Chemical stability	: Stable Under Normal Circumstances.
Possibility of hazardous reactions	: Hazardous polymerization will not occur.

10.2 Environmental

Conditions to avoid	: Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Carbon monoxide, Smoke, Carbon monoxide, sulfur oxides, aldehydes, and other petroleum decomposition products in the case of incomplete combustion. Oxides of nitrogen, phosphorus, calcium, copper, magnesium, sodium, and hydrogen sulfide may also be present

Section 11 - Toxicological Information

11.1 Toxicological Effects

Ingestion Toxicity	: No hazard in normal industrial use.
Skin Contact	: This material is likely to be slightly irritating to skin based on animal data.
Inhalation Toxicity	: Non-hazardous under Respiratory Sensitization category.
Eye Contact	: The material is likely to be irritating to eyes based on animal data.

11.2 Inhalation Toxicity Data

CAS	Chemical Name	Test	Value		Species	Source
64742-55-8	Distillates, petroleum, hydrotreated light paraffinic	Inhalation	3900mg/m3	4h	Rat	NLM_CIP
64742-62-7	Residual oils, petroleum, solvent-dewaxed	Inhalation	2.18mg/L	4h	Rat	NLM_CIP

Section 11 - Toxicological Information Continued

11.3 Dermal & Other Toxicity Data

CAS	Chemical Name	Test	Value		Species	Source
64742-55-8	Distillates, petroleum, hydrotreated light paraffinic	LC50	5000mg/L	96h	Oncorhynchus	IUCLID
64742-54-7	Distillates, petroleum, hydrotreated heavy paraffinic	LC50	5000mg/L	96h	Oncorhynchus	IUCLID
64742-62-7	Residual oils, petroleum, solvent-dewaxed	LC50	5000mg/L	96h	Oncorhynchus	IUCLID

Sensitizer : No data available to indicate product or components may be a skin sensitizer.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.

Carcinogenicity : Not expected to cause cancer. This product meets the IP-346 criteria of <3%.

Reproductive Toxicity : No data available if components greater than 0.1% may cause birth defects.

Section 12 - Ecological Information

12.1 Aquatic Toxicity

Acute Aquatic ecotoxicity : Non-hazardous under Aquatic Acute Environment category.

Chronic Aquatic ecotoxicity : Non-hazardous under Aquatic Chronic Environment category.

Persistence and degradability : Biodegrades slowly.

Bioaccumulative potential : Bioconcentration may occur.

Mobility in soil : This material is expected to have essentially no mobility in soil.

Results of PBT and vPvB assessment : Not determined.

Other adverse effects : No data available.

12.2 Ecological Data

CAS	Chemical Name	Test	Value		Species	Source
64742-55-8	Distillates, petroleum, hydrotreated light paraffinic	EC50	1000mg/L	48h	Daphnia magna	IUCLID
64742-54-7	Distillates, petroleum, hydrotreated heavy paraffinic	EC50	1000mg/L	48h	Daphnia magna	IUCLID
64742-62-7	Residual oils, petroleum, solvent-dewaxed	EC50	1000mg/L	48h	Daphnia magna	IUCLID

Section 13 - Disposal Considerations

13.1 Waste treatment

Waste treatment methods : Dispose of according to Federal, State, Local, or Provincial regulations.

Disposal Methods : Recycle used oil.

Waste Disposal : Use material is non-hazardous according to environmental regulations.

Contaminated packaging : Recycle containers whenever possible!

Section 14 - Transportation Information

14.1 U.S. Department of Transportation (DOT)

14.2. Shipping Description : If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil) International Maritime Dangerous Goods (IMDG)

14.2. DOT Compliance Note : U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

14.2. DOT Compliance Requirement : U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24

Section 15 - Regulatory Information

Regulatory Agency		Chemical List Status
(TSCA) Toxic Substance Control Act	: All components are either listed or not regulated US TSCA Inventory.	64742-54-7 64742-62-7 64742-55-8

WHMIS Hazard Class : None

Canada CPR : This product has been classified in accordance with the hazard criteria Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

CERCLA Sections

302, 313, 372 : This material does not contain reportable chemicals.

311, 312 :

Acute Health Hazard	No	Pressure Hazard	No	Fire Hazard	No
Chronic Health Hazard	No	Reactive Hazard	No		

New Jersey Right to Know (NJ RTK) This material does not contain reportable chemicals.

Massachusets Right to Know (MA RTK) This material contains the following listed chemicals 64742-55-8

Pennsylavania Right to Know (PA RTK) This material does not contain reportable chemicals.

Rhode Island Right to Know (RI RTK) This material does not contain reportable chemicals.

Section 16 - Other Information

ACGIH	American Conference of Governmental Industrial Hygienists
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RTK	Right-to-Know
SARA	Short-term Exposure Limit
TSCA	Toxic Substances Control Act
WHMIS	Workplace Hazardous Materials Information System

NFPA:		
	HEALTH	**0**
	FLAMMABILITY	**1**
	INSTABILITY	**0**
	SPECIAL	**-**

Disclaimer: This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the information to be correct, but cannot guarantee its accuracy or completeness.

Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product in a safe manner and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

Internal Use: 3E9

Material Safety Data Sheet

Date Prepared/Revised: 9/26/2012 Version no.: 01 Supersedes: (11/11/2010)

1.) Identification of the Mixture and of the Company

Product identifier**: Aervoe All Purpose Marking Paint - Aerosol**

Product name:

Non-Fluorescent Colors			Fluorescent Colors		
1380 Black	1381 Red	1382 Yellow	1390 Red	1391 Green	1392 Orange
1383 Blue	1384 Green	1385 Orange	1393 Yellow	1394 Blue	1395 Red-Orange
1387 White			1399 Pink		

Relevant identified uses of the substance: This product is designed to adhere to most surfaces - paved or unpaved.
Uses advised against: . Do not apply additional product until the previous coat is dry. Do not apply if surface is wet. Do not store at temperatures below 32°F (0°C). Do not use on turf surfaces.

CAS No.:	**Not Applicable (mixture)**
Manufacturer/Supplier:	**Aervoe Industries Incorporated**
Street address/P.O. Box:	**1100 Mark Circle**
Country ID/Postcode/Place	**Gardnerville, Nevada 89410**
Telephone number:	**001 (0) 1-775-782-0100**
e-mail:	**mailbox@aervoe.com**
National contact:	**Aervoe industries Incorporated**
For Product Information:	00**1 (0) 1-800-227-0196**
Emergency telephone number:	**001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs)**
	English Language Service

2. Hazards identification

This product does not meet the criteria for classification according to Directive 1999/45/EC
Potential health effects: **See Section 11**
Primary routes of entry: **Inhalation, Skin, Eyes, Ingestion**

3. Composition / Information on Ingredients

Material	CAS Number	EINECS Number	Weight Percent	Risk and Safety Phrases	Notes
Hydrocarbon Propellant	68476-88-8	270-705-8	10-30	R12, R45, R46, S45, S53	
Aliphatic Petroleum Distillates	64742-89-8	265-192-2	7-13	R45, R46, R65, S53, S45	
Hexane	110-54-3	203-777-6	1-5	R11, R38, R48/20, R62, R65, R67, R51/53, S2, S9, S16, S29, S33, S36/37, S61, S62	
Solvent naphtha (petroleum), medium aliph.	64742-88-7	265-191-7	1-5	R65, S2, S23, S24, S62	

Non-Fluorescent Colors Also Contain:					
Hexane	110-54-3	203-777-6	7-13	R11, R38, R48/20, R62, R65, R67, R51/53, S2, S9, S16, S29, S33, S36/37, S61, S62	
Acetone	67-64-1	200-662-2	1-5	R11, R36, R66, R67, S2, S9, S16, S26	

For full text of R&S- phrases: see section 16.

R Code Summation: R11, R12, R36, R38, R45, R48/20, R51, R53, R62, R65, R66, R67
S Code Summation: S2, S9, S23, S24, S26, S29, S33, S36/37, S45, S53, S61, S62

4.) First Aid Measures

General Advice: If symptoms persist, always call a doctor.

Inhalation First Aid: Remove victim to fresh air and provide oxygen if breathing is difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.

Skin Contact First Aid: Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact First Aid: If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.

Ingestion First Aid: If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire Fighting Measures

Flammable Properties: Aerosol
Flash Point: <0° C (-18° F)
Auto Ignition Temperature: Not Available
Flammable Limits in Air:
% by Volume: LEL: 0.9% UEL: 13%
Suitable extinguishing media: Carbon dioxide, dry chemical, water spray.
Unsuitable extinguishing media: None known
Special hazards arising from the substance or mixture: None known
Hazardous combustion products: Carbon dioxide, Carbon monoxide
Fire & Explosion Hazards: Closed Containers may rupture due to the buildup of pressure from extreme temperatures.

Advice for fire-fighters: Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH-

approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONARY MEASURES:
1) Follow personal protective equipment recommendations found in section 8.
2) Maintain adequate ventilation.

SPILL CLEAN-UP PROCEDURES:
1.) Evacuate unprotected personnel from the area.
2.) Remove sources of ignition if safe to do so.
3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
4.) Contain spill to prevent material from entering sewage or ground water systems.
5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.

7. Handling and Storage

Flammable Aerosol, use in a well ventilated area.
Do not use near sources of ignition.
Store out of direct sunlight.
Storage Temperature: 32° to 120°F (0° to 49°C)
Do not to eat, drink and smoke while working with this material.
Wash hands after use.

8. Exposure Controls / Personal Protection

Appropriate engineering controls:
Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
Keep away from sources of ignition.
Take precautionary measures against static discharge.

Personal Protection:
Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

Skin protection
Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection:
Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

Hazardous Ingredient	CAS Number	TWA	STEL

Hydrocarbon Propellant	68476-88-8	N/AV	N/AV
Aliphatic Petroleum Distillates	64742-89-8	N/AV	N/AV
Hexane	110-54-3	50ppm	N/AV
Solvent naphtha (petroleum), medium aliph.	64742-88-7	N/AV	N/AV
Hexane	110-54-3	50ppm	N/AV
Acetone	67-64-1	500ppm	750ppm

9. Information on Basic Physical and Chemical Properties

Appearance: Opaque	Odor: Hydrocarbon odor
Odor Threshold: N/AV	pH: N/AV
Melting Point: N/AV	Freezing Point: N/AV
Initial Boiling Point: N/AV	Boiling Point Range: N/AV
Flash Point: <0° C (-18° F)	Evaporation Rate: Faster than n-Butyl Acetate
Flammability Solid/Gas: Flammable gas	Upper LEL: 0.9% Lower LEL: 13%
Vapor Pressure: N/AV	Vapor Density: Heavier Than Air
Relative Density: N/AV	Solubility: Negligible
Partition Coefficient: n-octanol/ water: N/AV	Auto-ignition Temperature: N/AV
Decomposition Temperature: N/AV	Viscosity: N/AV
Explosive Properties: N/AV	Oxidizing Properties: N/AV

10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions
Conditions to avoid: Heat and ignition sources
Incompatible materials: Strong Oxidizing Agents
Hazardous decomposition products: Will not occur

11. Toxicological Information

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

12. Ecological Information

Toxicity: **No Data Available**
Persistence and degradability: **No Data Available**
Bioaccumulative potential: **No Data Available**

Mobility in soil: **No Data Available**
Results of PBT and vPvB assessment: **No Data Available**
Other adverse effects: **No Data Available**

13. Disposal Considerations

Waste Disposal: Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.
Product / Packaging disposal: Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

14. Transportation Information

US DOT

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Not Applicable

IMDG

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Not Applicable

IATA:

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Not Applicable

15. Regulatory Information

Workplace classification:
This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.
SARA Title 3:
Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard. Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.
TSCA status: All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

PROP 65 (CA): Warning: This product may contain chemicals know to the state of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

List of relevant Risk and Safety phrases:

R Phrases:

R11: Highly flammable
R12: Extremely flammable
R36: Irritating to eyes
R38: Irritating to skin
R45: May cause cancer
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation
R51: Toxic to aquatic organisms
R53: May cause long-term adverse effects in the aquatic environment
R62: Possible risk of impaired fertility
R65: Harmful: may cause lung damage if swallowed
R66: Repeated exposure may cause skin dryness or cracking
R67: Vapours may cause drowsiness and dizziness

S Phrases: S2, S9, S23, S24, S26, S29, S33, S36/37, S45, S53, S61, S62

S2: Keep out of the reach of children
S9: Keep container in a well-ventilated place
S23: Do not breathe gas/fumes/vapour/spray
S24: Avoid contact with skin
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S29: Do not empty into drains
S33: Take precautionary measures against static discharges
S36/37: Wear suitable protective clothing and gloves
S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
S53: Avoid exposure - obtain special instructions before use
S61: Avoid release to the environment. Refer to special instructions/safety data sheet
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

National Fire Protection Association (NFPA) ratings
Health = 2 Flammability = 4 Reactivity = 1

This SDS has been completed in accordance with Regulation (EC) No. 1907/2006

Date of Preparation/Revision: 9/26/2012
Supersedes: (11/11/2010)

Material Safety Data Sheet

Date Prepared/Revised: 9/26/2012 Version no.: 01 Supersedes: (11/11/2010)

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.

MATERIAL SAFETY DATA SHEET

COLGATE-PALMOLIVE
Institutional Products

Ajax® Country Spice Solid Room Deodorizer

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ACUTE HEALTH. . . .1
FIRE. 0
REACTIVITY. 0

HMIS HAZARD RATING				
Least=0	Slight=1	Moderate=2	High=3	Extreme= 4

PRODUCT NAME: Ajax® Solid Room Deodorizer-Country Spice
LABEL CODE: 04704
CAS NUMBER: Not applicable - product is a mixture
GENERAL USE: A solid freshener which stops odors and leaves a clean, fresh scent.

COLGATE-PALMOLIVE COMPANY
Institutional Products Division
191 East Hanover Avenue
Morristown, NJ 07962-1928

EMERGENCY TELEPHONE NUMBER: For emergency involving spill, leak, fire, exposure or accident, call CHEMTREC: (800) 424-9300, day or night.

FOR MEDICAL EMERGENCIES involving this product call (888) 489-3861.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS (present at a concentration > or = 1%):

Component	CAS #	%	PEL	TLV
POE Sorbitan Monooleate	9005-65-6	2-4	NE	NE
Dipropylene Glycol	110-98-5	2-4	NE	NE

The following components, present at a concentration > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA:

Component	CAS #	%	PEL	TLV
None - not applicable				

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Eye irritant on direct contact.
SKIN CONTACT: May cause skin irritation on prolonged contact.
INGESTION: May cause nausea, vomiting and diarrhea.
INHALATION: Not known.

4. FIRST AID MEASURES

EYE CONTACT: Flush eye with large amounts of water for 15 minutes. Get medical attention if irritation persists.
SKIN CONTACT: Remove and isolate contaminated clothing. Flush exposed area with warm water for 15 minutes. Get medical attention if irritation persists.
INGESTION: Drink sips of warm water or milk. Get medical attention if symptoms persist.
INHALATION: Remove to fresh air and take slow deep breaths. Drink some sips of water. If coughing persists, get medical attention.

5. FIRE FIGHTING MEASURES

Flash Point (Method): Not established
Extinguishing Media: CO_2, All-purpose dry chemical for plastic housing
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Small spills: Brush or vacuum up and place in container for disposal. Flush are with water

7. HANDLING AND STORAGE:

Store in a cool, dry place. (40-125°F)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONTROLS: Avoid contact with skin and eyes.
PROTECTIVE CLOTHING: Under normal conditions of use, no special protection for skin is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor:	Tan solid gel. Spicy floral scent.	Solubility in water:	Soluble with warming
Density:	1.02	pH:	Not determined

10. STABILITY AND REACTIVITY

GENERAL:	This product is stable. Hazardous polymerization will not occur.
INCOMPATIBLE MATERIALS:	None known.
HAZARDOUS DECOMPOSITION:	None known.

11. TOXICOLOGICAL INFORMATION

This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the MSDS.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with local, state, and federal laws and regulations (contact local or state government agency for specific rules). Do not dump into sewers, any body of water, or onto the ground.

14. TRANSPORTATION

This product is not regulated as a DOT hazardous material.

15. REGULATORY INFORMATION

RCRA (40 CFR 261, Subpart D): Not Applicable.

CLEAN WATER ACT: Not Applicable.

CLEAN AIR ACT: Not Applicable.

SARA:
6HFWLRQV 301-304 (ThUHshRQG SODQQLQg TuDnWLW– T34)
40 CFR 355: Not Applicable.

Section 313 (Toxic chemical release reporting)
40 CFR 372: The following chemicals must be reported under SARA 313: Not Applicable.

CERCLA:
6HFWLRQ 102 (5HSRUWDEOH 4uDnWLW– 54)
40 CFR 302: Not Applicable.

TSCA Section 8(b) INS ENTORY STATUS:
All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

NEW gERSEY RIGHT TO hNOW HAZARDOUS SUBSTANCE LIST:
This product contains the following components subject to reporting requirements: None

PENNSYLS ANIA HAZARDOUS SUBSTANCE LIST:
This product contains the following components subject to reporting requirements: None

MASSACHUSETTS SUBSTANCE LIST:
This product contains the following components subject to reporting requirements: None

CALIFORNIA SAFE DRINhING WATER AND TOu IC ENFORCEMENT ACT (PROPOSITION 65):
This product contains the following components subject to reporting requirements: None

CANADA:
Workplace Hazardous Materials Information System (WHMIS)-listed material.
This product contains the following components subject to reporting requirements: None

16. OTHER INFORMATION

Effective Date: 9uly 15, 1999
Supersedes MSDS dated May 1998
MSDS Status: Revised Sections 1, 11, 15

The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate-Palmolive makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

COLGATE-PALMOLIVE Company
MATERIAL SAFETY DATA SHEET

This industrial Material Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Ajax Dishwashing Liquid Traditional

Effective Date: November 10, 2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COLGATE-PALMOLIVE COMPANY **300 Park Avenue** **New York NY 10022** PRODUCT NAME: Ajax Dishwashing Liquid Traditional-Ruby Red Grapefruit, Lemon-Yellow, Orange Dishwashing Liquid and Anti-Bacterial Hand Soap, Baking Soda, Lavender CAS NUMBER: Not applicable – product is a mixture GENERAL USE: Formulated liquid detergent for hand dishwashing.	EMERGENCY TELEPHONE NUMBER: For emergency involving spill, leak, fire, exposure or accident, call CHEMTREC (800) 424-9300, day or night For MEDICAL EMERGENCIES involving this product call (888)489-3861

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA-REGULATED COMPONENTS (present at a concentration of > or = 1%):

Component	CAS#	%	PEL	TLV
Ethanol	64-17-5	1-5	1000 ppm	1000 ppm

The following components, present at a concentration of > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA:

Component	CAS#	%	PEL	TLV
Not Applicable				

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE CONTACT: Causes eye irritation on direct contact.

SKIN CONTACT: May cause skin irritation on prolonged or repeated contact.

INGESTION: May be harmful if swallowed in large quantities.

INHALATION: No adverse effects expected.

4. FIRST AID MEASURES

EYE CONTACT: Flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

SKIN CONTACT: Rinse area with plenty of water. Get medical attention if irritation persists.

INGESTION: Drink 1-2 glasses of water. Get medical attention.

INHALATION: Not Applicable.

5. FIRE FIGHTING MEASURES

Flash Point: > 200°F
Extinguishing Media: Water spray, all-purpose dry chemical, CO_2.
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

7. HANDLING AND STORAGE

Store in a tightly closed container in a cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONTROLS: Avoid eye and skin contact.

PROTECTIVE CLOTHING: The use of safety goggles and protective gloves is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Specific gravity @ 20°C:	1.010 – 1.052
pH:	6.3- 7.5

10. STABILITY AND REACTIVITY

GENERAL: This product is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS: None known.

HAZARDOUS DECOMPOSITION: None known.

11. TOXICOLOGICAL INFORMATION

This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the MSDS.

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with local, state, and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water or onto the ground.

14. TRANSPORTATION

Not regulated as a DOT hazardous material.

15. REGULATORY INFORMATION

RCRA (40 CFR 261, Subpart D): Not Applicable

CLEAN WATER ACT:
Contains sodium dodecylbenzene sulfonate and sulfuric acid; All variants but Baking Soda contain sodium bisulfite which are Section 311 materials.

CLEAN AIR ACT:
Contains ethanol and methanol which are Section 111 materials. Methanol is also a Section 112 material.

SARA:
Sections 301-304 (Threshold planning quantity - TPQ) 40 CFR 355: The threshold planning quantity for sulfuric acid is 1,000 lbs. The threshold planning quantity for hydrogen peroxide is 1,000 lbs. (All variants but Baking Soda)

Section 313 (Toxic chemical release reporting) 40 CFR 372: The following chemicals must be reported under SARA 313: Not Applicable

CERCLA: Section 102 (Reportable Quantity - RQ) 40 CFR 302:
The Reportable Quantity (RQ) for Lemon-Yellow variant to the environment is 33,333 lbs. based on the presence of sodium dodecylbenzene sulfonate (3%). Releases greater than or equal to 33,333 lbs. must be reported to the National Response Center (NRC) immediately: 800-424-8802.
The Reportable Quantity (RQ) for Baking Soda, Lavender, Ruby Red Grapefruit and Orange Antibacterial variants to the environment is 20,000 lbs. based on the presence of sodium dodecylbenzene sulfonate (5%). Releases greater than or equal to 20,000 lbs. must be reported to the National Response Center (NRC) immediately: 800-424-8802

New Jersey Right to Know Hazardous Substance List:
This product contains the following components subject to reporting requirements: Sodium dodecylbenzene sulfonate, ethanol, methanol, sulfuric acid; FD&C Blue No. 1 (Baking Soda variant); hydrogen peroxide and sodium bisulfite (All variants but Baking Soda); BHT (Lavender variant)

Pennsylvania Hazardous Substance List:
This product contains the following components subject to reporting requirements: Sodium dodecylbenzene sulfonate, ethanol, methanol, sulfuric acid; hydrogen peroxide, sodium sulfate, and sodium bisulfite (Lavender, Lemon-Yellow, Orange and Ruby Red Grapefruit variants); BHT (Lavender variant)

Massachusetts Substance List:
This product contains the following components subject to reporting requirements: Sodium dodecylbenzene sulfonate, ethanol, methanol, sulfuric acid; FD&C Blue No. 1 (Baking Soda variant); hydrogen peroxide, sodium sulfate, and sodium bisulfite (All variants but Baking Soda); BHT (Lavender variant)

Canada: Workplace Hazardous materials Information System (WHMIS)-listed material. This product contains the following components subject to reporting requirements: Sodium dodecylbenzene sulfonate, ethanol

TSCA Section 8(b) Inventory Status: All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

16. OTHER INFORMATION

Effective Date: November 10, 2006
Supersedes MSDS October 25, 2006
MSDS Status: Revised Section 9

The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

MATERIAL SAFETY DATA SHEET

COLGATE-PALMOLIVE
Institutional Products

Ajax Expert™ No-Rinse Hard Surface Cleaner

CPC 04944

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ACUTE HEALTH. . . .1
FIRE. 0
REACTIVITY. 0

HMIS HAZARD RATING				
Least=0	Slight=1	Moderate=2	High=3	Extreme=4

PRODUCT NAME: Ajax Expert™ No Rinse Hard Surface Cleaner (Concentrate)
LABEL CODE: 04944 (1 gal), 04946 (5 gal), 01143 (sachet)
CAS NUMBER: Not applicable - product is a mixture
GENERAL USE: A neutral pH cleaner for hard surfaces.

COLGATE-PALMOLIVE COMPANY
Institutional Products Division
191 East Hanover Avenue
Morristown, NJ 07960-3151

For consumer information: Call (800) 432-8226

EMERGENCY TELEPHONE NUMBER: For emergency involving spill, leak, fire, exposure or accident, call CHEMTREC: (800) 424-9300, day or night.

THE PITTSBURGH POISON CENTER HAS BEEN PROVIDED SPECIFIC INFORMATION FOR USE IN MEDICAL EMERGENCIES INVOLVING THIS PRODUCT: CALL COLLECT: (412) 692-5596.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS (present at a concentration > or = 1%):

Component	CAS #	%	PEL	TLV
None - not applicable				

The following components, present at a concentration > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA:

Component	CAS #	%	PEL	TLV
None - not applicable				

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:
EYE CONTACT: Causes eye irritation.
SKIN CONTACT: Causes skin irritation on prolonged contact.
INGESTION: May be harmful if swallowed.
INHALATION: No adverse effects expected.

4. FIRST AID MEASURES

EYE CONTACT: Flush eye with large amounts of warm water for 15 minutes. Get medical attention if irritation persists.
SKIN CONTACT: Rinse area with plenty of water. Get medical attention if irritation persists.
INGESTION: Drink 2-4 ounces of a clear liquid. Get medical attention.
INHALATION: Not applicable.

5. FIRE FIGHTING MEASURES

Flash Point (Method): Not established.
Extinguishing Media: Water spray, All-purpose dry chemical
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

7. HANDLING AND STORAGE:

Store in a tightly closed container in a cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONTROLS: Avoid contact with skin and eyes.
PROTECTIVE CLOTHING: No special protective equipment is required in institutional/industrial product use. The use of safety goggles and protective gloves is recommended in soaking or spraying operations where splashing may occur.
SPECIAL PRECAUTIONS: Keep out of the reach of children.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor: Fluorescent green liquid. Citrus scent. pH: 7.0 ± 0.2
Specific Gravity: 1.01 ± 0.01

10. STABILITY AND REACTIVITY

GENERAL: This product is stable. Hazardous polymerization will not occur.
INCOMPATIBLE MATERIALS: None known.
HAZARDOUS DECOMPOSITION: None known.

11. TOXICOLOGICAL INFORMATION

This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the MSDS.

12. ECOLOGICAL INFORMATION

Not known.

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with local, state, and federal laws and regulations (contact local or state government agency for specific rules). Do not dump into sewers, any body of water, or onto the ground.

14. TRANSPORTATION

This product is not regulated as a DOT hazardous material.

15. REGULATORY INFORMATION

RCRA (40 CFR 261, Subpart D): Not Applicable.

CLEAN WATER ACT: Not Applicable.

CLEAN AIR ACT: Contains glycol ethers which are Section 112 materials. Contains butyl carbitol and propylene glycol which are Section 111 materials.

SARA:
Sections 301-304 (Threshold planning quantity – TPQ)
40 CFR 355: Not Applicable.

Section 313 (Toxic chemical release reporting)
40 CFR 372: The following chemicals must be reported under SARA 313: Glycol ethers.

CERCLA:
Section 102 (Reportable Quantity – RQ)
40 CFR 302: Not Applicable.

TSCA Section 8(b) INVENTORY STATUS:
All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:
This product contains the following components subject to reporting requirements:
Glycol ethers

PENNSYLVANIA HAZARDOUS SUBSTANCE LIST:
This product contains the following components subject to reporting requirements:
Glycol ethers

MASSACHUSETTS SUBSTANCE LIST:
This product contains the following components subject to reporting requirements: None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):
This product contains the following components subject to reporting requirements: None

CANADA:
Workplace Hazardous Materials Information System (WHMIS)-listed material.
This product contains the following components subject to reporting requirements:
Butyl carbitol

16. OTHER INFORMATION

Effective Date: August 16, 2001
Supersedes MSDS dated June 7, 2001
MSDS Status: Revised Section 1

The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate-Palmolive makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

COLGATE-PALMOLIVE COMPANY
SAFETY DATA SHEET

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.0 SDS Number: 660000002334 Revision Date: 2016/02/25

SECTION 1. IDENTIFICATION

Product name : AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

Product code : 200000049985
Material : B02928820048

Manufacturer or supplier's details

Company : Colgate-Palmolive Co
300 Park Avenue
New York, NY 10022

Telephone : US: Consumer Affairs - 1-800-468-6502

Emergency telephone number : For emergencies involving spill, leak, fire, exposure or accident call CHEMTREC (24hr) at (800) 424-9300 or (703) 527-3887.

Medical Emergency (24HR): For MEDICAL EMERGENCIES involving this product call: (888) 489-3861

Recommended use of the chemical and restrictions on use

Recommended use : A formulated dishwashing liquid

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
LAURAMIDOPROPYLDIMETHYLAMINE OXIDE	61792-31-2	>= 1 - < 5
SODIUM CHLORIDE	7647-14-5	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice	:	No hazards which require special first aid measures.
If inhaled	:	Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.
In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Hazardous combustion products	:	No hazardous combustion products are known
Further information	:	Standard procedure for chemical fires.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions	:	No special environmental precautions required.
Methods and materials for containment and cleaning up	:	Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	For personal protection see section 8.

No special handling advice required.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
LAURAMIDOPROPYLDIMETHYLAMINE OXIDE	61792-31-2
SODIUM CHLORIDE	7647-14-5

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses

Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : orange

pH : 7.2

Flash point : > 200 °F

Density : 1.009 g/cm3

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable under recommended storage conditions.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No hazards to be specially mentioned.
Conditions to avoid	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:

Acute oral toxicity	:	LC50 (Rat): 500 - 1,000 mg/kg Method: OECD Test Guideline 423
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	LC50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402

SODIUM CHLORIDE:

Acute oral toxicity	:	LD50 (Rat): 3,550 mg/kg
Acute inhalation toxicity	:	LC50 (Rabbit): > 42,000 mg/l Exposure time: 1 h Test atmosphere: No information available. Method: No information available.
Acute dermal toxicity	:	LD50 (Rabbit): > 10,000 mg/kg Method: No information available.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:
Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Mild skin irritation

SODIUM CHLORIDE:
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days
Exposure time: 1 h
Method: OECD Test Guideline 405

SODIUM CHLORIDE:
Result: Mild eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Product:

Remarks: No data available

Components:

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE:
Exposure routes: Inhalation
Remarks: No data available

Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

SODIUM CHLORIDE:
Exposure routes: Inhalation
Remarks: No data available

Exposure routes: Dermal
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the SDS.

SECTION 12. ECOLOGICAL INFORMATION

The product has not been tested as a whole for environmental toxicity. However, environmental information on the ingredients in this product have been reviewed by the Environmental, Health and Safety group of Colgate-Palmolive and determined to have an acceptable environmental profile. This evaluation is based on available information on individual ingredients, interactions of ingredients, and similar

ingredients. Biodegradability claims are supported by data on ingredients (i.e., surfactants are biodegradable) or testing conducted on the final product (i.e., This product is biodegradable).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

DOT : Not regulated.

TDG : Not regulated.

IATA : Not regulated.

IMDG : Not regulated.

ADR : NOT REGULATED.

International Regulation

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Component RQ (lbs)
Sulfuric Acid	7664-93-9	1000	*
Sulfuric Acid	7664-93-9	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfuric Acid	7664-93-9	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Sulfuric Acid	SULFURIC ACID
SODIUM HYDROXIDE	1310-73-2

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Sulfuric Acid	SULFURIC ACID
SODIUM HYDROXIDE	1310-73-2

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Sulfuric Acid	SULFURIC ACID	0 - 0.1 %

Pennsylvania Right To Know

Water	WATER	70 - 90 %
C12-C15 0.6EO Ammonium Sulfate	Not Assigned	5 - 10 %
AMMONIUM SULFATE	7783-20-2	0 - 0.1 %

New Jersey Right To Know

Water	WATER	70 - 90 %
C12-C15 0.6EO Ammonium Sulfate	Not Assigned	5 - 10 %

LAURAMIDOPROPYLDIMETHYLAMINE OXIDE	61792-31-2	1 - 5 %
SODIUM CHLORIDE	7647-14-5	1 - 5 %

The components of this product are reported in the following inventories:

TSCA : All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

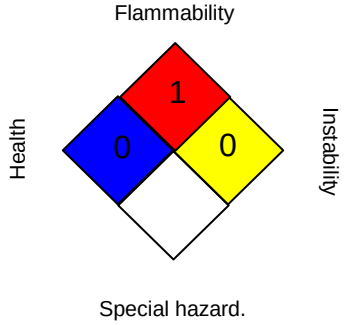
(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

AJAX TRADITIONAL DISHWASHING HAND LIQUID ORANGE - PALMOLIVE TRADITIONAL DISHWASHING HAND LIQUID ORANGE

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Further information

NFPA:



HMIS III:

HEALTH	**0**
FLAMMABILITY	**1**
PHYSICAL HAZARD	**0**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 2016/02/25

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612
Tel. 1-510-271-7000

Material Safety Data Sheet

I Product:	CLOROX COMMERCIAL SOLUTIONS® LEMON FRESH PINE-SOL® ALL PURPOSE CLEANER	
Description:	CLEAR, YELLOW, SLIGHTLY VISCOUS LIQUID WITH A LEMON, CITRUS ODOR	
Other Designations	**Distributor**	**Emergency Telephone Nos.**
	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call 1-800-446-1014. For Transportation Emergencies, call 1-800-424-9300 (Chemtrec).

II Health Hazard Data

Eye irritant.

No medical conditions are known to be aggravated by exposure to this product.

FIRST AID:

EYE CONTACT: Immediately rinse with water for 15 minutes. If irritation persists, call a doctor.

INGESTION: Drink a glassful of water. Call a doctor or poison control center.

SKIN CONTACT: Rinse with plenty of water. If irritation persists, call a doctor.

INHALATION: Move person to fresh air. If breathing problems develop, call a doctor.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Alkyl alcohol ethoxylates CAS # 66455-15-0	1 - 5%	Not established.

None of the materials in this product are on the IARC, OSHA, or NTP carcinogen lists.

IV Special Protection and Precautions

Hygienic Practices: Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods.

Engineering Controls: Use local exhaust to minimize exposure to product mist.

Personal Protective Equipment: Wear safety glasses. Wear rubber or neoprene gloves if there is the potential for repeated or prolonged skin contact.

V Transportation and Regulatory Data

DOT/IATA/IMDG: Not restricted.

EPA - SARA Title III/CERCLA: This product is regulated under Sections 311/312. This product contains no chemicals that are regulated under Section 313 or under Section 304/CERCLA.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Flash Point: >93°C (closed cup)

Fire Extinguishing Agents: Dry chemical, carbon dioxide (CO_2), foam, or water spray.

IX Physical Data

pH..... 10 - 11

Specific gravity.....~1.0

Solubility in water .....Soluble

Viscosity ..... ~30 cP

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DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH DATE PREPARED 2/2009

ANTIFREEZE

MSDS No. MI205

Date of Preparation: 5/07

Revision: 3

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: ANTIFREEZE
Product Brand Name: PAR, Coolant Plus, PAR 50/50, Coolant Plus 50/50, Coolant Plus 70/30
Chemical Formula: C2H6O2
CAS Number: 107-21-1
Synonyms: MEG, EG, ethylene glycol, 1,2-ethanediol, glycol, glycol alcohol
General Use: Freezing point depressant
Manufacturer: KMCO, LP., 16503 Ramsey Road, Crosby, Texas 77532, Phone (281)328-3501, FAX (281)328-9528

24 HOUR EMERGENCY NUMBER: CHEMTREC 1-800-424-9300

Section 2 - Composition / Information on Hazardous Ingredients

Ingredient Name	CAS Number	% wt *or* % vol
Ethylene Glycol	107-21-1	94
Proprietary Ingredients		6

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	TWA	STEL	TWA	STEL	TWA	STEL	IDLH
Ethylene Glycol	none estab.	none estab.	100 mg/m3	none estab.	none estab.	none estab.	none estab.

Section 3 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

WARNING! HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

H 1
F 1
R 0

Potential Health Effects

Acute Effects

Inhalation: Vapor inhalation is generally not a problem unless heated or misted. Exposure to vapors over an extended time period has caused throat irritation and headache. May cause nausea, vomiting, dizziness and drowsiness. Pulmonary edema and central nervous system depression may also develop. When heated or misted, has produced rapid, involuntary eye movement and coma.

Eye: Splashes may cause irritation, pain, and eye damage.

Skin: Minor skin irritation and penetration may occur.

Ingestion: Initial symptoms in massive dosage parallel alcohol intoxication, progressing to CNS depression, vomiting, headache, rapid respiratory and heart rate, lowered blood pressure, stupor, collapse, and unconsciousness with convulsions. Death from respiratory arrest or cardiovascular collapse may follow. Lethal dose in humans: 100 ml (3-4 ounces).

Carcinogenicity: Not Classifiable as a Human Carcinogen

Medical Conditions Aggravated by Long-Term Exposure: Persons with pre-existing skin disorders, eye problems, or impaired liver, kidney, or respiratory function may be more susceptible to the effects of this substance.

Chronic Effects: Repeated small exposures by any route can cause severe kidney problems, brain damage may also occur. Skin allergy can develop. May damage the developing fetus.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Skin Contact: Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention.
Ingestion: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

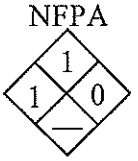
After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: Give sodium bicarbonate intravenously to treat acidosis. Urinalysis may show low specific gravity, proteinuria, pyuria, cylindruia, hematuria, calcium oxide, and hippuric acid crystals. Ethanol can be used in antidotal treatment but monitor blood glucose when administering ethanol because it can cause hypoglycemia. Consider infusion of a diuretic such as mannitol to help prevent or control brain edema and hemodialysis to remove ethylene glycol from circulation.

Section 5 - Fire-Fighting Measures

Flash Point: 232 °F (111 °C)
Flash Point Method: CC
Burning Rate: not available
Autoignition Temperature: 748 °F (398 °C)
LEL: 3.2% v/v
UEL: 15.3% v/v

NFPA



Flammability Classification: Slight to moderate fire hazard when exposed to heat or flame.
Extinguishing Media: Dry chemical, foam or carbon dioxide. Water or foam may cause frothing. Water spray may be used to extinguish surrounding fire and cool exposed containers. Water spray will also reduce fume and irritant gases.
Unusual Fire or Explosion Hazards: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Containers may explode when involved in a fire.
Hazardous Combustion Products: Carbon dioxide and carbon monoxide may form when heated to decomposition. May produce acrid smoke and irritating fumes when heated to decomposition.
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Use non-sparking tools and equipment. Do not flush to sewer.
Small Spills: Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand), and place in a chemical waste container. Do not use combustible materials, such as saw dust.
Large Spills
Containment: Wear respirator and protective clothing as appropriate. Shut off source of leak if safe to do so. For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.
Cleanup: Contain and recover liquid when possible. Collect liquid in appropriate container. Absorb residue with an inert material. Consult with your environmental department for detailed clean up instructions.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120). CERCLA requires reporting spills and release to soil, water and air in excess of reportable quantities.

Section 7 - Handling and Storage

Handling Precautions: May be harmful or fatal if swallowed.
Storage Requirements: Store in a cool, dry, ventilated area. Separate from acids and oxidizing materials.
Regulatory Requirements: This product contains the following chemical(s) subject to the reporting requirements of SARA Title III Section 311,312, and 313: Ethylene Glycol (Reportable Quantity = 5000 lb.).

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Controls should be such that adequate ventilation is provided.
Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.
Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.
Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance and Odor: Clear, blue-green, odorless
Odor Threshold: not available
Vapor Pressure: 0.06 mm Hg @ 20 C
Vapor Density (Air=1): 2.1
Formula Weight: 62.07
Density: 9.28 lbs/gal @ 20°C
Specific Gravity (H_2O=1, at 4 °C): 1.115
pH: 7 – 11.5

Water Solubility: soluble
Other Solubilities: alcohols, methyl isosbutyl carbitol
Boiling Point: 197.6C (388F)
Freezing/Melting Point: -13C(9F)
Viscosity: 21cP @ 20C
Refractive Index: 1.4316 @ 20C
Surface Tension: 48.4 dyne/cm @ 20C
% Volatile: 100 @ 21C
Evaporation Rate: not available

Section 10 - Stability and Reactivity

Stability: Antifreeze is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization will not occur.
Chemical Incompatibilities: Strong oxidizing agents, strong bases
Conditions to Avoid: Heat, flames, ignition sources, and incompatibles.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.

Section 11- Toxicological Information

Toxicity Data:*

Eye and Skin Effects: Negligible degree of irritation upon eye or skin contact. A slight macerating action comparable to that caused by glycerin may result from very severe prolonged exposures to ethylene glycol. There is no evidence to indicate that ethylene glycol is absorbed through the skin in quantities sufficient to produce systemic injury in normal industrial handling.

Acute Inhalation Effects:
Human, inhalation, LD_{Lo}: 786 mg/kg

Acute Oral Effects:
Rat, oral, LD_{50}: 4700 mg/kg

Chronic Effects: Repeated small exposures by any route can cause severe kidney problems. Brain damage may also occur. Skin allergy can develop.

Carcinogenicity: Not Classifiable as a Human Carcinogen

Teratogenicity: Has shown teratogenic effects in laboratory animals

* See NIOSH, *RTECS* for additional toxicity data.

Section 12 - Ecological Information

Ecotoxicity: LC50/96-hour values for fish are over 100mg/l

Environmental Fate: When released into the soil, this material is expected to readily biodegrade, is expected to leach into groundwater and is not expected to evaporate significantly. When released into the water, this material is expected to readily biodegrade, and is expected to have a half-life between 1 and 10 days. When released into the air, this material is expected to be readily degraded, and is expected to have a half-life between 1 and 10 days.

Environmental Degradation: This material is not expected to bioaccumulate.

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Disposal Regulatory Requirements: Consult current Federal, state and local regulations.

Container Cleaning and Disposal: Dispose of container and unused contents in accordance with federal, state, and local requirements.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name (>5,250 lbs):
Other Regulated Substances, liquid, N.O.S., 9, NA3082, PG III, RQ (Ethylene Glycol)

Shipping Name (<5,250 lbs):
Antifreeze

Hazard Class (>5,250 lbs): 9

Hazard Class (<5,250 lbs):
Non-hazardous Liquid

ID No.: NA3082

Packing Group: III

Label: Class 9, NA3082

Special Provisions (172.102):
none

Packaging Authorizations
a) Exceptions: 173.155
b) Non-bulk Packaging: 173.203
c) Bulk Packaging: 173.241

Quantity Limitations
a) Passenger, Aircraft, or Railcar: none
b) Cargo Aircraft Only: none

Vessel Stowage Requirements
a) Vessel Stowage: Category A
b) Other: none

Section 15 - Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Acute Health, chronic health

EPA SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements under SARA Title III, Section 313 (40 CFR 372); Ethylene Glycol 107-22-1 80 - 96%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, appendix A to Subpart A.

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (96% maximum) of 5,000 pounds, is 5,208 pounds. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulation.

CALIFORNIA PROPOSITION 65: This product may contain the following substances known to the State of California to cause cancer and/or reproductive harm: 1,4-Dioxane (trace amount).

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances list..

CANADIAN WHMIS CLASSIFICATION: Class D - Division 2 - Subdivision B - (a toxic material causing other chronic effects).

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the ingredients are listed on the EINECS inventory.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

AUSTRALIA: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

Section 16 - Other Information

Prepared By: KMCO, LP.
Revision Notes: All sections revised as part of conversion to 16 Section format.

Additional Hazard Rating Systems: none

Disclaimer: This product is FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. DO NOT TAKE INTERNALLY.

KMCO, LP. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. No warranty of fitness for any particular purpose, warranty of merchantability, or any other warranty expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use of the product and of the information referred to herein are beyond the control of KMCO, LP., KMCO, LP expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

For additional product information, please contact the KMCO, LP. Sales Office at 281-272-4100.

Armor All Products Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product:	ARMOR ALL ORIGINAL PROTECTANT
Description:	MILKY WHITE LIQUID WITH SLIGHT ODOR

Other Designations	Manufacturer	Emergency Telephone Nos.
Armor All Protectant Original Shine Finish Surface Cleaner and Protectant	Armor All Products Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300

II Health Hazard Data

Non-irritating to skin and eyes. Under normal consumer use and conditions, the likelihood of adverse health effects is low.

No medical conditions are known to be aggrevated by exposure to this product.

FIRST AID:
EYE CONTACT: Remove contact lenses. Flush eyes throughly with plenty of water for 15 minutes. If irritation occurs, get medical attention.

SKIN CONTACT: Wash area with soap and water. If irritation occurs, get medical attention.

INGESTION: Drink a glassful of water. Get medical attention if effects occur.

INHALATION: If breathing problems occur, remove to fresh air.

III Hazardous Ingredients

Ingredients	Concentration	Worker Exposure Limit
Silicone Emulsion CAS # N/A	30 - 40%	Not established

None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen list.

IV Special Protection and Precautions

Hygienic Practices: Wash hands with soap and water after use.

Engineering Controls: Use general ventilation to minimize exposure to vapor or mists.

Work Practices: Avoid eye and skin contact and inhalation of vapor or mist.

KEEP OUT OF REACH OF CHILDREN

V Transportation and Regulatory Data

DOT/IATA/IMO: Not restricted

TSCA Status: All ingredients in this product are listed on the TSCA inventory.

EPA - SARA Title III/CERCLA:
Packaged product is not reportable under Sections 311/312. Contains no chemicals regulated under: CERLA Sections 311, 312, 313, or 304.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed down material. For spills of multiple products, responders should evaluate the MSDS's of the products for incompatibility with this product.

Waste Disposal: Dispose of in accordance with all applicable federal, state and local regulations.

VII Reactivity Data

Stable under normal use and conditions.

VIII Fire and Explosion Data

Combustion: Non flammable or explosive.

Fire Extinguishing Agents: Water, water fog, dry chemical, foam or carbon dioxide (CO_2) fire extinguishers.

If product has undergone partial or complete evaporation, may be combustible.

IX Physical Data

Boiling Point	212°F/100°C
Specific Gravity(H_2O=1)	1.00 @ 25° C
Solubility in Water	Easily soluble
pH	7
Evaporation rate (Butyl acetate =1	0.4

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DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH DATE PREPARED 1/98

Material Safety Data Sheet

ITW Dymon

HMIS®			
HEALTH	2	REACTIVITY	0
FLAMMABILITY	0	PERSONAL PROTECTION	B

Identity: Asidufoam
Formula: B337
Part numbers: 33732, 33701, 33705, 33725, 33735, 33755

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION 1: Company Identification

Manufacturer's Name
ITW Dymon

Address (Number, Street, City, State, and ZIP Code)
805 East Old 56 Highway

Olathe, Kansas 66061

Emergency Telephone Number
1-800-535-5053

International Emergency Telephone Number
1-352-323-3500

Telephone Number for Information
1-913-397-9889

Signature of Preparer (Optional)
Regulatory Dept.

SECTION 2: Ingredients/Identity Information

Components (Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	% (Opt.)
Water	7732-18-5	None	None		60 – 100%
2-Butoxyethanol (skin designation)	111-76-2	50 ppm	20 ppm		1 – 5%
Sulfamic Acid	5329-14-6	None	None		0.5 - 1.5%
Citric Acid	77-92-9	None	None		0.5 - 1.5%

Any substance listed as hazardous by the States of California, Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania or Texas is described above if known present in regulated concentrations.

SECTION 3: Hazards Identification

Route(s) of Entry	Eyes?	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes	Yes

Acute Health Hazards - Warning. Causes eye and skin irritation. Harmful if inhaled. May be harmful if swallowed. May be absorbed through intact skin.

Chronic Health Hazards - Repeated or prolonged occupational overexposure may cause dermatitis or induce Painter's Syndrome.

Carcinogenicity:

Chemical:	OSHA:	NTP:	IARC:
None	No	No	No

Signs and Symptoms of Exposure - Redness, tearing or burning in eyes. Redness, drying or cracking skin. Irritation of nose or throat. Irritation of the throat or stomach, nausea, vomiting, and diarrhea if swallowed.

Medical Conditions Generally Aggravated by Exposure - Pre-existing blood, liver, kidney or skin disorders may be adversely affected.

SECTION 4: Emergency and First Aid Procedures:

Eyes - Flush with plenty of water for at least 15 minutes lifting eyelids to insure complete removal. See a physician immediately.

Ingestion - Do not induce vomiting. Rinse out mouth with water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Inhalation - Get to fresh air. If breathing has stopped, qualified personnel should administer artificial respiration.

Skin - Flush with plenty of water for at least 15 minutes. If irritation arises and persists, call a physician.

SECTION 5: Fire Fighting Measures

Flash Point (Method Used)	Flammable Limits	LEL	UEL
None to boiling point (PMCC)	No Data	No Data	No Data

Extinguishing Media - Not usually necessary as this product does not readily support combustion. Use media appropriate for fire's fuel source.

Special Fire Fighting Procedures - Keep containers cool and vapors down with water spray. Prevent runoff from entering sewers and public waterways. Wear SCBA in chemical fires.

Hazardous Products of Combustion- Carbon dioxide, carbon monoxide, sulfur dioxide, sulfur trioxide, ammonia or various organic oxidation products.

Unusual Fire and Explosion Hazards - None known.

SECTION 6: Accidental Release Measures

Small Spill - Caution, slip hazard. Wipe up small spills promptly with a dry absorbent cloth or other absorbent material.

Large Spill – For large spills, isolate and ventilate area. Wear protective gear as necessary. Absorb liquid with vermiculite, absorbent cloth, or other absorbent material. Prevent material from entering sewers or drains. Dike to prevent spread. Transfer contaminated material into suitable container for proper disposal.

SECTION 7: Handling and Storage

Handling - Avoid inhaling mist or vapors. Avoid contact with eyes, skin and clothing. Do not swallow. Wash thoroughly after handling. Wash hands after use and before eating, drinking, smoking, using restrooms, etc.

Storage – Follow label directions carefully. Keep out of reach of children. Keep container tightly sealed when not in use. Do not contaminate water, food or feed by use or storage.

SECTION 8: Exposure Controls / Personal Protection

Eye Protection – Yes, goggles or approved safety glasses (ANSI Z87).

Skin Protection – Yes, impervious.

Respiratory Protections – Not usually necessary. Use with adequate ventilation. Use NIOSH/MSHA approved respirator if PELs or TLVs are exceeded.

Engineering Controls – Ventilation not usually necessary but should be provided in the event of overexposure.

SECTION 9: Physical and Chemical Properties

Appearance and Odor:	Clear light yellow liquid with a pine scent.
PH	1.3 ± 0.5
Specific Gravity (70°F)	1.011
Boiling Point:	212° F
Melting Point:	No Data
Evaporation Rate (Butyl Acetate = 1)	No Data
Vapor Pressure (mm-Hg @ 70°F)	No Data
Vapor Density (AIR = 1)	> 1
Solubility in Water	Complete
Volatile Organic Compounds (VOCs)	30.5 grams per liter or 3% by weight VOCs.

SECTION 10: Stability and Reactivity

Hazardous Polymerization – This product will not undergo hazardous polymerization.

Hazardous Decomposition or Byproducts – Carbon dioxide, carbon monoxide, sulfur dioxide, sulfur trioxide, ammonia or various organic oxidation products.

Chemical Stability - Stable

Incompatibility (Materials to Avoid) - Strong alkalis, oxidizing and reducing agents; materials reactive with hydroxyl compounds, and reactive metals such as aluminum, magnesium.

SECTION 11: Toxicological Information

No Data

SECTION 12: Ecological Information

No Data

SECTION 13: Disposal Consideration

Disposal Method - Dispose of in accordance with all applicable local, state, and federal regulations.

RCRA Waste Information – If this product becomes a waste, it would be a hazardous waste (D002) as defined by RCRA (40 CFR 261). However the waste should be properly characterized to evaluate whether its composition has been modified prior to disposal.

SECTION 14: Transport Information

DOT Information – 49 CFR 172.101

Quarts/Gallons

Proper Shipping Description: Consumer commodity
Hazard Class: ORM-D
Identification Number: None
Packing Group: None

Bulk Material

Proper Shipping Description: Compound, cleaning liquid, (Amidosulfonic acid, Citric acid)
Hazard Class: 8
Identification Number: UN 1760
Packing Group: III

Air Transportation:

Proper Shipping Description: Corrosive liquid, N.O.S., (Amidosulfonic acid, Citric acid)
Hazard Class: 8
Identification Number: UN 1760
Packing Group: III

Marine Pollutants: None

SECTION 15: Regulatory Information

US Federal Regulations:

TSCA (Toxic Substances Control Act) Status

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

CERCLA RQ – 40 CFR 302.4 (a)

None Listed

SARA 313 Components – 40 CFR 372.65

2-Butoxyethanol (CAS 111-76-2) – 3%

State and Local Regulations:

California Proposition 65

None

Section 16: Additional Information

Date Prepared:
Rev. 2 – 09/05/06
Rev. 1 - 03/28/06

WARNING! The use of this product is beyond the control of the manufacturer; therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials. The manufacturer warrants only that this product meets the manufacturer's specifications for such product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY. FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER, OF THIS PRODUCT. THE MANUFACTURER SHALL BE IN NO WAY RESPONSIBLE FOR THE IMPROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the manufacturer for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

MATERIAL SAFETY DATA SHEET
ATRAZINE 4L

1. IDENTIFICATION

Product name:	**ATRAZINE 4L**
Chemical name of active ingredient(s):	Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine
Manufacturer/Registrant:	Makhteshim Agan of North America, Inc. 4515 Falls of Neuse Road, Suite 300 Raleigh, NC 27609 Phone: 919-256-9300
For fire, spill, and/or leak emergencies, contact Infotrac:	Phone: 1-800-535-5053
For medical emergencies and health and safety inquiries, contact Prosar:	Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	%	CAS NO.	OSHA/ PEL	ACGIH/TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Atrazine	42.9	1912-24-9	Not Established	5 mg/m3 (TWA)	5 mg/m3** (TWA)	IARC3

** recommended by NIOSH

3. HAZARDS IDENTIFICATION

PHYSICAL PROPERTIES:
Appearance: White liquid
Odor: Faint odor

EMERGENCY OVERVIEW: CAUTION Harmful if swallowed. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, or clothing.

SYMPTOMS OF ACUTE EXPOSURE: Exposure may cause mild irritation of eyes, skin or respiratory tract. If swallowed, nausea, vomiting, or diarrhea can result. A skin sensitization (allergic) reaction may occur in some individuals.

HAZARDOUS DECOMPOSITION PRODUCTS: None known

UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZAARDS: Thermal decomposition products may include, but are not limited to, carbon monoxide, hydrogen cyanide, and acetonitrile. This product is a NFPA Class IIIB Combustible Liquid.

4. FIRST AID

IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: If ingested, induce emesis or lavage stomach. Treat symptomatically.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT: >200°F (TCC)
FLAMMABLE LIMITS (% IN AIR): Not Applicable
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABILITY: Not Applicable
FIRE & EXPLOSION HAZARD: Thermal decomposition products may include, but are not limited to, carbon monoxide, hydrogen cyanide, and acetonitrile. This product is a NFPA Class IIIB Combustible Liquid.
FIRE-FIGHTING EQUIPMENT: Use dry chemical, foam, or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes, or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering, and a NIOSH-approved chemical cartridge pesticide respirator with dust/mist pre-cartridges of a self-contained breathing apparatus (SCBA). For small spills cover with an absorbent material such as pet litter. Sweep up and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal the container and handle in an approved manner. Flush the area with water to remove any residue. Do not allow wash water to contaminate water supplies. Do not contaminate water, food, or feed by disposal or cleaning of equipment.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Avoid contact with skin or eyes. Wash thoroughly with soap and water after handling. Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
PRECAUTIONS TO BE TAKEN IN STORAGE: Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material. Do not allow product to freeze. Store above -5° C (23°F).
STORAGE TEMPERATURE (MIN/MAX):
Minimum: 23° F (-5° C)
Maximum: Normal ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATION AND ON-FARM APPLICATIONS, CONSULT THE PRODUCT LABEL.
INGESTION: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.
EYE CONTACT: To avoid eye contact, wear safety glasses with side shields or chemical goggles.
SKIN CONTACT: To avoid skin contact, wear rubber gloves, rubber boots, long-sleeved shirt, long pants and a head covering.
INHALATION: To avoid breathing mist or spray, wear a NIOSH-approved chemical cartridge pesticide respirator with dust/mist pre-cartridges or a supplied-air respirator.

USER SAFETY RECOMMENDATIONS:
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENGINEERING CONTROLS: Refer to product label.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White Liquid
ODOR: Faint Odor
RELATIVE DENSITY: 1.103 @ 22° C
pH: 6-8.7 @ 25° C
FLASH POINT: >200°F (TCC)

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal ambient and anticipated storage conditions.
HAZARDOUS POLYMERIZATION: Will Not Occur
CONDITIONS TO AVOID: Do not allow product to freeze. Store above -5° C (23°F).
HAZARDOUS DECOMPOSITION PRODUCTS: None Known

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES:

Ingestion:	Oral LD50 (Rat)	Females: 972 mg/kg body weight Males: between 1,000 & 3,000 mg/kg body weight
Dermal:	Dermal LD50 (rabbit)	>5,000 mg/kg body weight
Inhalation:	Inhalation LC50 (rat)	2.13 mg/L (4 hrs)
Eye Irritation:	Mildly irritating	
Dermal Irritation:	Non-irritating	
Skin sensitization:	Not a contact sensitizer	

MUTAGENIC POTENTIAL:
ATRAZINE: Not mutagenic
REPRODUCTIVE HAZARD POTENTIAL:
ATRAZINE: No adverse reproductive effects observed.
CHRONIC/SUBCHRONIC TOXICITY STUDIES:
ATRAZINE: Cardiotoxicity in Long Term Study with High Doses (Dogs)
CARCINOGENIC POTENTIAL:
ATRAZINE: Mammary Tumors (Female Sprague-Dawley Rats), Sex and Strain Specific
None Observed (Male Sprague-Dawley Rats, F-344 Rats or Mice)

TARGET ORGANS:
ATRAZINE: Heart

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

SUMMARY OF EFFECTS: Slight toxicity to fish and wildlife
ECO-ACUTE TOXICITY

Atrazine:	Rainbow Trout 96-hours LC50 =9.9 mg/L
	Bluegill Sunfish 96-hours LC50 =42 mg/L
	Bobwhite Oral LD50 940 mg/kg
	Bobwhite 8-day Dietary LC50>5,000 ppm
	Mallard 8-day Dietary LC50 >5,000 ppm
	Invertebrate *Ceriodaphnia dubia* 48 HR LC50 4.9 mg A.I./L
	Peking Duck LD50>10,000 mg/kg
	Bees LC_{50} > 100 µg/bee

MATERIAL SAFETY DATA SHEET
ATRAZINE 4L

ECO-CHRONIC TOXICITY

Atrazine:	Fish (Fathead minnow) Early Life Stage MATC >0.25 and<0.46 mg A.I./L
	Mallard Reproduction NOEC 225 ppm a.i.
	Bobwhite Reproduction NOEC 225 ppm a.i.
	Invertebrate (Ceriodaphnia dubia) Life Cycle NOEL 2.5 ppm

ENVIRONMENTAL PERSISTANCE/MOBILITY: Stable in sterile water, both in the light and dark. In laboratory soil, degrades slowly under both aerobic and anaerobic conditions in the dark (t½~5 mo.); more rapidly in the light (t½~45 d). Exhibits medium to very high mobility with four soil textures (Koc= 39 to 155).

13. DISPOSAL CONSIDERATIONS:

PESTICIDE DISPOSAL: Open dumping is prohibited. Wastes resulting from the use of this product are acutely toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION:

DOT CLASSIFICATION:
Not regulated

INTERNATIONAL TRANSPORTATION:
MO (vessel): Not regulated

IATA (air): Not regulated

15. REGULATORY INFORMATION:

SARA TITLE III CLASSIFIED:

Section 302	Not applicable
Section 311/312:	Acute Health Hazard
	Chronic Health Hazard
Section 313 chemical(s):	Atrazine (42.9%) (CAS No. 1912-24-9)

CA PROPOSITION 65: Not applicable
CERCLA REPORTABLE QUANTITY (RQ): None
RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.
TSCA: Ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION:

NFPA HAZARD RATINGS			
Health:	1	0	Least
Flammability:	1	1	Slight
Reactivity:	0	2	Moderate
		3	High
		4	Severe

MSDS DATE: 10-20-08; Supercedes versions dated 10-9-08, 5-15-07, 10-21-05; 1-5-05, 12-02-04, 11-25-02, 2-4-00, 3-5-02, and 6-12-02; Changes made to Sections 11 and 12.

The information contained herein is given in good faith and is believed to be correct, but no warrant, express or implied, is made. Consult Makhteshim Agan of North Amreica, Inc. for further information.

AVERY DENNISON
Office Products North America
Markers and Adhesives
20955 Pathfinder Road
Diamond Bar, CA 91765
Phone: 615-456-8219 (8 am-5 pm CDT M-F)

Consumer Information Sheet #30
Date Prepared: 11/01/94
Last Revision Date: 12/18/91

SECTION I PRODUCT IDENTIFICATION

Avery Dennison Product: Glue Stic

SECTION II HAZARDOUS INGREDIENT/IDENTITY INFORMATION

Material Name:	CAS #:	OSHA PEL (ppm):	ACGIH TLV (ppm):

SECTION III PHYSICAL DATA

Boiling Point: N/AP
Specific Gravity: 1.09
Vapor Pressure (mmHg): N/AP
Vapor Density (Air=1): N/AP
Melting Point: 56°C

Appearance: Semi-solid adhesive stick, off white
Odor: Odorless
Water Solubility: Miscible
Evaporation Rate (Butyl Acetate=1): N/AP

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/AP (method used - N/AP) Flammable Limits: N/AP
Extinguishing Media: Water spray, dry chemical
Fire Fighting Procedure: Use water to cool containers exposed to fire
Unusual Hazards: None

SECTION V REACTIVITY DATA

Stability: Product is stable
Conditions to Avoid: N/AP
Incompatibility: N/AP
Hazardous Decomposition: Carbon monoxide, carbon dioxide, hydrocarbons, smoke
Hazardous Polymerization: Will not occur

SECTION VI HEALTH HAZARD DATA

Symptoms of Overexposure for each Potential Route of Exposure -
Inhaled: No effects of exposure expected
Eye Contact: May cause eye irritation
Absorbed through Skin: No effects of exposure expected
Ingestion: No effects of ingestion expected
Health Effects or Risks from Exposure -
Medical Conditions Aggravated by Exposure: Chronic - No data found Carcinogenic: No
This product contains materials that are listed on the following lists: NTP: No IARC: No OSHA: No
S.A.R.A. Information: This product is not reportable under SARA Title III, Section 313
Toxic Information: Non-toxic per 16 CFR 1500.3 (C)(2)(I)
Emergency First Aid Procedures -
Eye Contact: Immediately flush eyes with plenty of water, if irritation occurs, call physician
Skin Contact: General precautionary measures, wash after handling
Inhaled: N/AP
Ingestion: If a significant quantity has been swallowed, precautionary measures suggest inducing vomiting, and call a physician

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

Spill or Leak Procedures: Scoop up and dispose, flush spill with water
Waste Disposal: Dispose of with solid waste according to federal, state, and local regulations
Storage: Do not store above 120°F as glue will soften at elevated temperatures

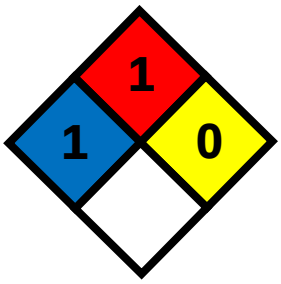
SECTION VIII CONTROL MEASURES

Work Practices: Observe ordinary measures of personal hygiene

To the best of our knowledge this information is accurate; however, we do not, and cannot, warrant or guarantee its accuracy and cannot be liable for any damages, consequential or actual which might result from any reliance therein. This MSDS was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Material Safety Data Sheet

NFPA



HMIS

Health Hazard	**1**
Fire Hazard	**1**
Reactivity	**0**

Issuing Date 12- August-2010 **Revision Date** 12- August-2010 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name
STIHL BAR AND CHAIN LUBRICANT
PART NUMBER; 0781-516-5001(32_{OZ}); 0781-516-5008 (1 gal); 0781-516-5006 (5 gal); 0781-516-5007 (55 gal).

MSDS Number
BC0001

Recommended Use

Manufactured by:
Omni Specialty Packaging
10399 S. Hwy 1
Shreveport, LA 71105
Phone: 1 (318) 524-1100

Emergency Telephone Number
CHEMTREC
1 (800) 424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance Straw Viscous Liquid **Physical State** Liquid **Odor** Petroleum odor

Potential Health Effects

Principal Routes of Exposure Eye contact, Skin contact, Inhalation, Ingestion

Acute Toxicity

Eyes Irritating, but will not permanently injure eye tissue.

Skin Substance minimally irritating upon direct contact. May cause irritation.

Inhalation Will not produce vapors unless heated to temperatures of ~300 °F. Inhalation of oil mist or fumes can cause irritation of the nose, throat and upper respiratory tract

Ingestion Do not ingest. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Other On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations.

Chronic Effects Prolonged exposure may cause chronic effects.

Aggravated Medical Conditions Personnel with pre-existing skin disorders should avoid contact with this product.

Environmental Hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula Mixture

Chemical Name	CAS-No	Weight %
Naphthenic Petroleum Oil	64742-53-6	93-99
Petroleum Product Additive	mixture	1-7

4. FIRST AID MEASURES

Eye Contact Flush with large amount of water for 15 minutes. Get medical attention if eye irritation develops or persists. If material is hot, treat for thermal burns and take victim to the hospital immediately.

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately if skin discoloration occurs.

Inhalation If headache, nausea, irritation, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or symptoms persist.

Ingestion f more that several mouthfuls have been swallowed, give two glasses of water (16 Oz.). Get immediate medical attention or advice.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties Not flammable.

Flash Point 420°F

Suitable Extinguishing Media Water Fog. Carbon dioxide (CO_2). Foam. Dry chemical.

Unsuitable Extinguishing Media Not Available

Hazardous Combustion Products Not Available

Explosion Data
Sensitivity to Mechanical Impact Not sensitive.
Sensitivity to Static Discharge Not sensitive.

Protective Equipment and Precautions for Firefighters Wear positive pressure self-contained breathing apparatus (SCUBA). Use water to cool containers exposed to flames. Structural firefighters' protective clothing will only provide limited protection. Mist or sprays may be flammable below the product normal flash point.

NFPA **Health Hazard** 1 **Flammability** 1 **Stability** 0 **Physical and Chemical Hazards** -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. If spilled, take caution, as material can cause surfaces to become very slippery.

Methods for Containment Dike far ahead of liquid spill for later disposal.

Methods for Cleaning Up Pick up free liquid for recycle and/or disposal. Residual liquid and/or solid can be absorbed on inert material.

Evacuation Procedures

Large Spill Consider initial downwind evacuate for at least 300 meters (1000 feet).

Fire If tank, rail car or tank car is involved in a fire, isolate for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.

Reporting Requirements Spills that enter a water body must be reported immediately to the USEPA's National Response Center at (800)546-2972. Check with your local and state regulators regarding their reporting requirements.

7. HANDLING AND STORAGE

Handling Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode. See NFPA 30 and OSHA 1910.106 – flammable and combustible liquids.

Storage Store away from heat, sparks, open flame, or strong oxidizing agents in closed and properly labeled containers. Empty containers retain product residue (liquid, and/or vapor) and can be dangerous

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Naphthenic Petroleum Oil 64742-53-6	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3

Engineering Measures Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended limits.

Personal Protective Equipment

Eye/Face Protection Safety glasses or face shield where splashing is possible. Full face-shield to be worn during emergencies.

Skin and Body Protection As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.

Respiratory Protection Not normally needed. During emergencies wear respirator.

Hygiene Measures Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Straw Viscous Liquid	**Odor**	Mild Petroleum Oder
Physical State	Liquid	**pH**	N/A
Flash Point	420°F	**Autoignition Temperature**	>315.6 °C / > 600°F
Boiling Point/Range	404°C	**Freezing Point**	<-34°C / <-29.2°F
Explosion Limits	N/A	**Flammability Limits in Air**	N/A
Specific Gravity	0.91	**Solubility**	Negligible
Evaporation Rate	N/A	**Vapor Pressure**	N/A

Vapor Density	1+	**Density**	N/A

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible Products Open Flame and strong oxidizing agents.

Conditions to Avoid Heat, flames, and sparks.

Hazardous Decomposition Products Decomposition and combustion products may include smoke, carbon dioxide, carbon monoxide, and toxic fumes.

Hazardous Polymerization None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Test on similar materials show a low order of acute oral and dermal toxicity.

Acute Oral Effects Test on similar materials indicates low order of acute toxicity.

Acute Inhalation Effects Low acute toxicity expected on inhalation.

Skin Effects Practically non-toxic if absorbed. Other similar highly refined products have not shown skin tumors in mouse skin painting studies.

Eye Irritation Minimal irritation on contact. Eye irritation slightly or practically non-irritating base on similar products.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Naphthenic Petroleum Oil 64742-53-6	Rat >5000 mg/kg	Rabbit >5000 mg/kg	Rat > 2.18 mg/L 4 hours

Chronic Toxicity

Chronic Toxicity Prolonged exposure may cause chronic effects.

Carcinogenicity Not considered a potential carcinogen base on IP346 DMSO of less than 3.0 wt%

Target Organ Effects Respiratory system, Eyes, Skin,

Genotoxicity This product is considered non-mutagenic and has negative potential for tumor development based on from Modified Ames Assay, with Mutagenic Index of less than 1.0.

12. ECOLOGICAL INFORMATION

Ecotoxicity If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Naphthenic				

Petroleum Oil 64742-53-6				

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with local regulations. Keep this product out of sewers and waterways.

Contaminated Packaging Dispose of in accordance with local regulations.

Chemical Name	RCRA – Halogenated Organic Compounds	RCRA – P Series Wastes	RCRA – F Series Wastes	RCRA – K Series Wastes
Naphthenic Petroleum Oil 64742-53-6	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Naphthenic Petroleum Oil 64742-53-6	Present	X	265-156-6	x	X	x	X	X

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
If spilled into navigable waters it is reportable to National Response Center, 800-424-8802. Reportable Quantity = Oil Sheen present on navigable water surface. (40 CFR 116; 401.15)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.
Florida
No listed ingredients are present
Massachusetts RTK
No listed ingredients are present
Minnesota RTK
No listed ingredients are present
New Jersey RTK
Lists petroleum oil, but this product does not contain hazardous ingredients.
Pennsylvania RTK
Lists petroleum oil, but this product does not contain hazardous ingredients greater than 3%.
Illinois DOL TSL
No listed ingredients are present

International Regulations

Mexico – Grade	No information available.
Canada	Not listed on the Canadian Controlled Product Ingredient Disclosure and is compliant with Controlled Products Regulation
CONEG Metals	Since cadmium, chromium, lead and mercury are not detectable and it does not exceed 100 ppm total in this product, it is compliant with CONEG Metals regulation.
EEC (Europe)	This product is not known to be a dangerous good internationally. R-Phrases: R45: May Cause Cancer S-Phrases: S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53 : Avoid exposure - obtain special instructions before use. Hazard Label: None Danger Symbol: T : Toxic

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D2B Toxic materials

16. OTHER INFORMATION

Prepared By	Safety Department
Issuing Date	12- August-2010
Revision Date	12- August-2010
Revision Note	Not applicable

Disclaimer
The information provided on this MSDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

Material Safety Data Sheet

Effective Date: 05-NOV-2010
Product: BRUSH & BASAL OIL

I. IDENTIFICATION

Chemical Name: Oil Carrier and Petroleum Oil Adjuvant
Chemical Family: Adjuvants
Formula: Not applicable, formulated mixture.
Synonyms: None
CAS Number: Not applicable, formulated mixture.
EPA Number: None required

II. PHYSICAL DATA

Boiling Point: Not determined
Freezing Point: Not applicable
Spec Gravity: 0.8570 gms/cc
Vapor Pressure: Not determined
Vapor Density: Not applicable
Solubility: Negligible
Volatiles: Nil
Evaporation: Not applicable
Melting Point: Not applicable
Appearance: Clear to light yellow liquid, petroleum odor.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
Hydrotreated Light Paraffinic Distillate (Petroleum Oil)	64742-55-8	98.00	5 mg/m3 (mist)	Eye irritant
Polyoxyethylene sorbitan fatty acid ester, an emulsifier		2.00	N/E	Non-hazardous

IV. FIRE AND EXPLOSION HAZARD

Flash Point: >360 Degrees F.
Autoignition Temp: >580 Degrees F.
Flammable Limit: Not determined
Extinguishing Media: Use foam, water spray, dry chemical, carbon dioxide or vaporizing liquid type extinguishing agents. Frothing may occur when using water or foam if sprayed into containers of hot, burning liquid.
Special Fire Fight Proc: Wear self-contained breathing apparatus and full protective clothing. Use water spray to keep fire-exposed containers cool.
Fire and Expl Hazard: May produce fumes, smoke, carbon monoxide,

Material Safety Data Sheet

Effective Date: 05-NOV-2010
Product: BRUSH & BASAL OIL

aldehydes or other products.

V. HEALTH HAZARD

Carcinogen Information: Not listed by IARC, OSHA or NTP.

ACUTE EFFECTS OF OVER EXPOSURE

Swallowing: Harmful if swallowed. Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Skin Absorption: Harmful if absorbed through skin.

Inhalation: Avoid breathing mists or vapors. This product is not expected to present an inhalation hazard at ambient conditions.

Skin contact: This product may cause slight skin irritation upon short-term direct contact. Prolonged or repeated skin contact may result in dermatitis, characterized by chapping, dryness and reddening.

Eye Contact: May cause moderate eye irritation. Avoid contact with eyes.

Chronic Effects: Prolonged or repeated skin contact may result in oil acne, characterized by blackheads with possible secondary infection.

Other Hazard: Personnel with pre-existing skin conditions should avoid contact with this product.

EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a doctor or poison control center. Do not give any liquids to drink. Do not give anything by mouth to an unconscious person.

Skin: Remove any contaminated clothing and wash affected area with soap and water. Launder clothing before reuse. Seek medical attention if irritation develops.

Inhalation: Move to fresh air. If breathing becomes difficult, administer oxygen. Seek medical attention if irritation develops.

Eyes: Immediately flush eyes with water for at least 15 minutes, holding eyelids open. If irritation persists, seek medical attention.

Notes to Physician: There is no specific antidote for this material. Contains petroleum distillate.

Material Safety Data Sheet

Effective Date: 05-NOV-2010
Product: BRUSH & BASAL OIL

Vomiting may cause aspiration pneumonia.

VI. REACTIVITY

Stability:	Stable
Conditions to Avoid:	Sources of ignition.
Polymerization:	Will Not Occur
Conditions to Avoid:	Sources of ignition.
Incompatibility material:	May react with strong oxidizers such as liquid chlorine, concentrated oxygen, sodium hypochlorite, etc. as these present an explosion hazard.
Hazardous Combustion:	May produce fumes, smoke, carbon monoxide, aldehydes or other products.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc:	Discharges or spills that enter any water body must be immediately reported to the National Response Center at 1-800-424-8802. Spills on soil should be immobilized and removed immediately. Spills to water bodies should be diked or dammed to prevent further spread. Recover free product and dispose of properly.
Waste Disposal Method:	This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

VIII. SPECIAL PROTECTION INFORMATION

Respiration:	None required under normal use conditions.
Ventilation:	General and/or local exhaust should be sufficient.
Gloves:	Impervious gloves.
Eyes:	Chemical goggles or safety glasses
Other:	Emergency shower, eyewash station, impervious apron and footwear.

IX. SPECIAL PRECAUTIONS

Special precaution:	Keep out of reach of children. Do not store near food, feed or other materials to be used or consumed by humans or animals. Keep away

Material Safety Data Sheet

Effective Date: 05-NOV-2010
Product: BRUSH & BASAL OIL

from flames, sparks, oxidizing materials or hot surfaces. Empty oil containers can contain explosive vapors.
Other precaution: Do not attempt to clean empty containers as residue is difficult to remove.

X. SHIPPING INFORMATION

Shipping name: Not regulated by D.O.T.
Hazard Class: None
Identification No: None
Labels Required: None required
Placarding: None
Freight Class: Adhesive, Adjuvant, Spreader or Sticker, Liquid, N.O.I. (NMFC Item 42652, Class 60)

Chemical Name	Equivalent R.Q.
Not applicable	Not applicable

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:
(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum

Health: 0 Fire: 1 Reactivity: 0

S.A.R.A. Title III Hazard Classification: (Yes/No)

Immediate (Acute) Health: Y Delayed (Chronic) Health: N
Sudden Release of pressure: N Fire: N
Reactive: N

Helena Chemical Company believes that the data contained herein is factual. This data is not to be taken as a warranty or representation of legal responsibility. It is offered solely for your consideration, investigation and verification.

BRUSH & BASAL OIL

CARRIER AND EMULSIFIER

For use as a carrier or adjuvant with oil-soluble herbicides for basal bark and broadcast stem treatments.

PRINCIPAL FUNCTIONING AGENTS:

Petroleum oil*	98.0%
Polyoxyethylene sorbitan fatty acid ester	2.0%
TOTAL	100.0%

*Contains petroleum distillates.

FOR AGRICULTURAL, COMMERCIAL, AND INDUSTRIAL USE.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Inside Panel for Additional Precautionary Statements.

SN 0505/1110

NET CONTENTS: ☐ 2.5 Gallon (9.46 L) ☐ 5 Gallon (18.92 L) ☐ 30 Gallons (113.55 L) ☐ BULK _____

MANUFACTURED FOR
HELENA CHEMICAL COMPANY
225 SCHILLING BOULEVARD, SUITE 300
COLLIERVILLE, TN 38017

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

FIRST AID	
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call poison control center or doctor for treatment advice.
IF SWALLOWED:	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
Note to Physician: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

STORAGE AND DISPOSAL

Storage: Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial us, replace lids and close tightly. Do not put concentrate or dilute materials in food or drink containers. Do not contaminate pesticides, fertilizers, water, food, or feed by storage or disposal. Keep water out of this product storage or oil may not emulsify properly.

Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in sanitary landfill, or by other procedures approved by state and local authorities. Do not cut or weld metal containers. Plastic: Do not reuse empty container. Triple rinse (or equivalent) during mixing and loading and add rinse water to spray tank. Recycling decontaminated containers is the best option for container disposal. The Agricultural container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at www.acrecycle.org. Decontaminated containers may also be disposed of in a sanitary landfill.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

GENERAL INFORMATION

This product is a highly refined emulsifiable petroleum oil to be used as a carrier (diluent) or adjuvant and mixed with oil soluble herbicides for woody plant control in forest and other non-crop sites where diesel oil, kerosene and similar oil carriers or additives are recommended. When used as a carrier or adjuvant, this product will aid in the spreading and penetration of herbicides into bark and stems of woody plants.

DIRECTIONS FOR USE

For Basal Bark Applications: This product can be mixed with oil soluble or miscible herbicides and, when allowed by the herbicide label, be used as the sole diluent or carrier to improve spreading and penetration into bark. Thinline, streamline, high and low volume basal bark applications can be made with this product and labeled herbicide mixtures. Suggested mixing rates when used as the sole carrier vary from 1% herbicide in 99% of this product to 75% herbicide in 25% of this product depending on herbicide method of application. For specific dilution rates consult the herbicide label for the product being used. Typical applications direct these mixtures onto the lower 18 inches of individual brush and tree stems.

For directed or broadcast stem and foliage spraying: When allowed by the herbicide label, this product can be sued as the sole carrier for herbicides or used with herbicide/water mixtures to improve spreading and penetration into the plant. For herbicide and water mixtures use up to 40% of this product by volume in these mixtures. Consult the herbicide label being used for proper mixing sequences. Since an emulsion is formed, maintain agitation to prevent separation. When used as the sole carrier with oil soluble herbicides add the required amount of herbicide to this product in the spray tank. A true solution is formed, but agitation is recommended. Consult the herbicide label of the product being used for use rate and volume per acre recommendations. If the compatibility of mix components is unknown, conduct a jar test before mixing large quantities. Use coarse sprays or special equipment designed to minimize spray drift.

Note: This product may increase potential for plant injury if used over desirable plants. When in doubt about plant safety conduct small tests first or consult with university extension foresters or similar experts before using over the top. Observe precautions on labels of other products regarding potentially phytotoxic interactions with oils.

CONDITIONS OF SALE - LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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Disclaimer: Always refer to the label on the product before using Helena or any other label.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	BAYTHROID® XL
Product code (UVP)	05753952
SDS Number	102000013617
EPA Registration No.	264-840

Relevant identified uses of the substance or mixture and uses advised against

Use	Insecticide
Restrictions on use	See product label for restrictions.

Information on manufacturer

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

All Emergencies, 24hr/ 7 days	1-800-334-7577

Product Information Telephone No.

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Aspiration hazard : Category 1
Skin sensitisation : Category 1B
Eye irritation : Category 2A
Carcinogenicity : Category 2
Acute toxicity (Inhalation): Category 3
Acute toxicity (Oral): Category 4
Flammable liquids : Category 4

Signal word: Danger

Hazard statements

May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of causing cancer.

Causes skin irritation.
Toxic if inhaled.
Harmful if swallowed.
Combustible liquid

Precautionary statements

Avoid breathing mist and spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not eat, drink or smoke when using this product.
Keep away from open flames/hot surfaces. - No smoking.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician.
In case of fire: Use sand, dry chemical or alcohol-resistant foam for extinction.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Keep cool.
Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Beta-Cyfluthrin	68359-37-5	12.70
Cyclohexanone	108-94-1	20.00
Naphthalene	91-20-3	8.70
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	58.60

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms	Irritation, Sensitising effects, CNS depression, Narcosis

Indication of any immediate medical attention and special treatment needed

Risks	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Foam, Dry chemical, Water spray
Unsuitable	None known.

Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point	62.8 °C
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
Advice on protection against fire and explosion	Keep away from heat and sources of ignition.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Beta-Cyfluthrin	68359-37-5	50 ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	50 ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	5 ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	5 ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	0.01 mg/m3 (TWA)		OES BCS*
Cyclohexanone	108-94-1	20 ppm (TWA)	02 2012	ACGIH
Cyclohexanone	108-94-1	50 ppm (STEL)	02 2012	ACGIH
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (REL)	2010	NIOSH
Cyclohexanone	108-94-1	200 mg/m3 / 50 ppm (PEL)	02 2006	OSHA Z1
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (TWA)	1989	OSHA Z1A
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (TWA)	06 2008	TN OEL
Cyclohexanone	108-94-1	20 ppb (AN ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	80 ug/m3 (AN ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	480 ug/m3 (ST ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	120 ppb (ST ESL)	07 2011	TX ESL
Cyclohexanone	108-94-1	100 mg/m3 / 25 ppm (TWA PEL)	08 2010	US CA OEL
Naphthalene	91-20-3	10 ppm (TWA)		OES BCS*
Naphthalene	91-20-3	10 ppm (TWA)	02 2012	ACGIH
Naphthalene	91-20-3	15 ppm (STEL)	02 2012	ACGIH

Naphthalene	91-20-3	10 ppm (TWA)	02 2013	ACGIH NIC
Naphthalene	91-20-3	50 mg/m3 / 10 ppm (REL)	2010	NIOSH
Naphthalene	91-20-3	75 mg/m3 / 15 ppm (STEL)	2010	NIOSH
Naphthalene	91-20-3	50 mg/m3 / 10 ppm (PEL)	02 2006	OSHA Z1
Naphthalene	91-20-3	75 mg/m3 / 15 ppm (STEL)	1989	OSHA Z1A
Naphthalene	91-20-3	50 mg/m3 / 10 ppm (TWA)	1989	OSHA Z1A
Naphthalene	91-20-3	75 mg/m3 / 15 ppm (STEL)	06 2008	TN OEL
Naphthalene	91-20-3	50 mg/m3 / 10 ppm (TWA)	06 2008	TN OEL
Naphthalene	91-20-3	10 ppb (AN ESL)	07 2011	TX ESL
Naphthalene	91-20-3	38 ppb (ST ESL)	02 2013	TX ESL
Naphthalene	91-20-3	50 ug/m3 (AN ESL)	07 2011	TX ESL
Naphthalene	91-20-3	200 ug/m3 (ST ESL)	02 2013	TX ESL
Naphthalene	91-20-3	75 mg/m3 / 15 ppm (STEL)	08 2010	US CA OEL
Naphthalene	91-20-3	50 mg/m3 / 10 ppm (TWA PEL)	08 2010	US CA OEL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	2560 ug/m3460 ppm (ST ESL)	10 2003	TX ESL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	256 ug/m346 ppm (AN ESL)	10 2003	TX ESL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection — When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection — Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

Eye protection — Safety glasses, in case of increased risk, also a face shield

Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	yellow to brown
Physical State	liquid, clear
Odor	characteristic
Odour Threshold	no data available
pH	4.5 (1 %) at 20 °C
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	1.02 g/cm³ at 20 °C
Evapouration rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	dispersible
Minimum Ignition Energy	no data available
Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	no data available
Viscosity	no data available
Flash point	62.8 °C
Autoignition temperature	no data available
Lower explosion limit	no data available

Upper explosion limit	no data available
Explosivity	not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	not applicable
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	no data available
Hazardous decomposition products	no data available

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Eye contact, Inhalation, Skin Absorption, Skin contact

Immediate Effects

Eye	Severe eye irritation.
Skin	Moderate skin irritation. Contact with product may result in transient tingling and reddening of the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Ingestion	May be fatal if swallowed.
Inhalation	Mists may cause respiratory tract irritation.Irritation of mucous membranes.Inhalation of high vapour concentrations can cause CNS-depression and narcosis.

Information on toxicological effects

Acute oral toxicity	LD50 (male rat) 647 mg/kg
	LD50 (female rat) 695 mg/kg

Acute inhalation toxicity	LC50 (male rat) 0.7 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual) LC50 (female rat) 0.9 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual) LC50 (rat) > 2.0 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. (actual)
Acute dermal toxicity	LD50 (male/female combined rabbit) > 2,000 mg/kg
Skin irritation	Moderate skin irritation. (rabbit)
Eye irritation	Severe eye irritation. (rabbit)
Sensitisation	Sensitising (guinea pig)

Assessment repeated dose toxicity
The toxic effects of beta-Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment Mutagenicity
beta-Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity
beta-Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

Cyclohexanone	108-94-1	Group A3
Naphthalene	91-20-3	Group A4

NTP

Naphthalene	91-20-3

IARC

Cyclohexanone	108-94-1	Overall evaluation: 3
Naphthalene	91-20-3	Overall evaluation: 2B

OSHA
None.

Assessment toxicity to reproduction
beta-Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with beta-Cyfluthrin is related to parental toxicity.

Assessment developmental toxicity
beta-Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with beta-Cyfluthrin are related to maternal toxicity.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) 0.000068 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient beta-cyfluthrin.
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) 0.00029 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient beta-cyfluthrin.
Toxicity to aquatic plants	IC50 (Desmodesmus subspicatus) > 0.01 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient beta-cyfluthrin. No acute toxicity was observed at its limit of water solubility.
Environmental precautions	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Contaminated packaging	Triple rinse containers. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.

If burned, stay out of smoke.
Follow advice on product label and/or leaflet.

RCRA Information Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR

NA-Number	**1993**
Packaging group	III
Proper shipping name	COMBUSTIBLE LIQUID, N.O.S. (BETA-CYFLUTHRIN, CYCLOHEXANONE, NAPHTHALENE)
RQ	Reportable Quantity is reached with 1,149 lb of product.

IMDG

UN number	**3082**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN, CYCLOHEXANONE SOLUTION)

IATA

UN number	**3082**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN, CYCLOHEXANONE SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 264-840

US Federal Regulations

TSCA list

Cyclohexanone	108-94-1
Naphthalene	91-20-3
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Beta-Cyfluthrin	68359-37-5	1.0%
Naphthalene	91-20-3	0.1%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Naphthalene	91-20-3

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Beta-Cyfluthrin	68359-37-5	NJ
Cyclohexanone	108-94-1	CA, CT, MN
Naphthalene	91-20-3	CA, CT, MN, NJ

Canadian Regulations

Canadian Domestic Substance List

Cyclohexanone	108-94-1
Naphthalene	91-20-3
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5

Environmental

CERCLA

Cyclohexanone	108-94-1	5,000 lbs
Naphthalene	91-20-3	100 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Cyclohexanone	108-94-1
Naphthalene	91-20-3
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification

criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word:	Warning!
Hazard statements:	Causes substantial but temporary eye injury. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Do not get in eyes, on skin, or on clothing. Do not breathe vapours or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2	Flammability - 2	Instability - 1	Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2	Flammability - 2	Physical Hazard - 1	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 09/11/2013

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

Belquat 612

GENERAL DESCRIPTION:

Belquat 612 is a liquid sanitizing agent and germicide approved by the State of Florida for equipment decontamination in the fight against the spread of Citrus Canker disease. Belquat 612 is easily diluted with fresh water and dispensed in the field. A wide range of package sizes allows for ultimate flexibility and economy.

- A concentrated product – Reduces costs
- Effective germicide at 2000 ppm –Economical
- Hard water tolerance – No reduction in effectiveness.
- Not corrosive to equipment – Eliminates premature equipment replacement.
- Pleasant mild odor.

PHYSICAL PROPERTIES:

Appearance	:	clear, straw-colored liquid
Density	:	8.33 lbs./gallon
Odor	:	mild
Hard water stability	:	excellent
% Quaternary ammonium	:	21.7%

DIRECTIONS FOR USE:

Equipment Sanitation: Use 1 gal. Of Belquat 612 diluted with 108 gallons of water (2000 ppm active). Thoroughly soak all equipment entering sensitive areas including undercarriage.
General Areas of Use: Disinfection in groves of trucks, picking equipment and tractors. Disinfection in processing plants of yard tractors, and trailers.

SAFETY:

Belquat 612 is safe to use around personnel

CAUTION:

Keep out of reach of children. Keep out of eyes, always wear eye protection when diluting or applying this product. Flush eyes thoroughly and seek medical attention if eyes become irritated. Do not ingest; seek medical attention if product is consumed.

Belquat 612: 10/00

BELL CHEM CORP.
MANUFACTURING & DISTRIBUTION
1340 BENNETT DR. • LONGWOOD, FL 32750

SAFE CHEM INC.
TECHNICAL SALES & SERVICE
P.O. BOX 1237 • ZELLWOOD, FL 32798

APPROVED DECONTAMINATION PRODUCTS & METHODS

CITRUS HEALTH RESPONSE PROGRAM - COMPLIANCE AGREEMENT ATTACHMENT – SCHEDULE 11

In order to prevent the spread of citrus diseases, it is essential that personnel and equipment working near or contacting any citrus plant material be decontaminated in accordance with Citrus Health Response Program rules, with an approved material, regardless of whether an infestation has been proven to exist. Risks of acquiring and dispersing citrus diseases such as citrus canker bacterial inoculum and the black spot fungal pathogen are greatest when diseased citrus plant material and surrounding vegetation are wet. Avoid any unnecessary contact with citrus.

DECONTAMINATION of personnel and equipment are required procedures to be carried out by the terms set forth within each Citrus Health Response Program Compliance Agreement under authority of Chapter 581.184 (6), Florida Statutes and Rule Chapter 5B-63, F.A.C. The following steps meet minimum standards for most regulated entities. Citrus nurseries have additional requirements.

1 Prior to departing a citrus grove or citrus production unit, a citrus receiving facility, or a disposal site, all personnel must **inspect** vehicles and equipment for citrus plant material and debris **and clean** all vehicles, equipment, picking sacks, clothing and hand tools free of fruit, limbs, leaves, soil and debris prior to bacterial decontamination. This plant material and debris must be left on the property or be disposed of in accordance with established Citrus Health Response Program procedures.

2 All personnel, vehicles and equipment (picking sacks, hand tools, etc.) must be decontaminated by an appropriate sanitizing method in accordance with *Approved Decontamination Products & Methods* (Schedule 11).

It is important that all users of approved products in this listing always READ AND FOLLOW THE PRODUCT LABEL. Please note that no single antimicrobial product is approved for use interchangeably on both personnel and equipment. In addition to grove and harvesting equipment and vehicles, citrus fruit picking sacks and clippers must also be disinfected with an approved equipment decontaminant listed in this document under, "DECONTAMINATION OF EQUIPMENT."

DECONTAMINATION OF PERSONNEL: All persons should disinfect hands, arms and any other parts of the body that have contacted citrus and surrounding vegetation, **plus** gloves and hats, and any clothing, shoes and small personal items (pen, hand lens, glasses, pocketknife, etc.) that have come in contact with risky plant material, using one of the following prescribed products in accordance with label directions. (Larger equipment and worker accessories associated with harvesting operations should be treated with the products described in the EQUIPMENT section below.) Some personnel decontaminants are one-step no-rinse products, which are listed below under the heading, "PERSONNEL DECONTAMINANTS for use on Clothing AND Skin," and can be applied to clothing while being worn, in addition to skin. Other personnel decontaminants, which are listed below under the heading, "PERSONNEL DECONTAMINANTS for use ONLY on Skin," are approved for skin use only, requiring a follow-up water rinse, or soap and water hand-washing BEFORE use of the product. When using these materials, allow the no-rinse products to air-dry. For thorough decontamination of hands, use normal hand washing action for 20 to 30 seconds, paying special attention to fingernails and areas between fingers. Products marked with '*' are in a formulation that can be applied to clothing and shoes using a spray dispenser. With all products, avoid contact with eyes, and observe product safety precautions given by the manufacturer. It is important that the users of any of these products always READ AND FOLLOW THE LABEL DIRECTIONS.

PERSONNEL DECONTAMINANTS **for use on Clothing AND Skin:**

1. *** GX-1027 Antimicrobial Soap**	Galloway Chemical	(800) 445-1143
2. *** Canker Guard**	Flo Tech. Inc.	(800) 335-6832
3. *** Csan 154 QT Soap**	Bell Chem Corporation	(866) 877-2355
4. *** EcoCare 360**	Ecolab	(651) 293-2233
5. *** Medi-Kwik AntiMicrobial & Fungicidal Skin Cleanser**	(by Envirosafe, Inc.)	No Contact Available
6. *** Triple Crown Super Healer**	(by Envirosafe, Inc.)	No Contact Available
7. *** QHS Quaternary Hand Sanitizer** (by Chemstar Products, Inc.)	Stepan Co.	(800) 457-7673
8. *** C-Soap**	Agri Flow	(863) 381-2628

PERSONNEL DECONTAMINANTS **for use ONLY on Skin:**

A. Hibiclens (by SSL)	Medco Sports	(800) 55medco
B. Hibistat (by SSL) (wholesale only)	Medco Sports	(800) 55medco
C. EcoCare 250	Ecolab	(651) 293-2233
D. EcoCare 350 (alcohol-base / no rinse)	Ecolab	(651) 293-2233
E. FS Antimicrobial Hand Cleaner; FS E-2 Sanitizing Hand Soap	ZEP Manufacturing Co.	(800) 313-8439
F. Acclaim Antibacterial Liquid Hand Soap	ZEP Manufacturing Co.	(800) 313-8439
G. Nobac Instant Foam Hand Sanitizer	Mason Chemical Co.	(800) 362-1855
H. Zep Foam San	(by Zep Manufacturing Co.)	Product Discontinued
I. Zep Foamy Sanz	Zep Manufacturing Co.	(800) 313-8439
J. Selig Foaming Hand Sanitizer	Selig Industries	(800) 447-3544
K. Selig Perfect Touch	Selig Industries	(800) 447-3544

APPROVED DECONTAMINATION PRODUCTS & METHODS

CITRUS HEALTH RESPONSE PROGRAM - COMPLIANCE AGREEMENT ATTACHMENT – SCHEDULE 11

PERSONNEL DECONTAMINANTS **for use ONLY on Skin:** (continued)

L. QS Plus	(non-alcohol hand sanitizer)	Aero Chemical Co.	(800) 795-9222

DECONTAMINATION OF EQUIPMENT: Equipment and vehicle surfaces (including undercarriages) should be regularly inspected for freedom from plant debris and soil residue, pressure washed with detergent, and then further disinfected with any of the following approved equipment decontamination materials applied to all surfaces to the point of runoff. Recommended contact time for all listed chemical decontaminants is ten minutes. Although use of equipment decontaminants on personnel is prohibited, fruit picking sacks and clippers must be cleaned and then disinfected with one of these Equipment Decontamination Materials. Where skin sensitivity is of concern, these articles may be immersed in prescribed QAC or chlorine solutions for ten minutes, and then rinsed in clean water prior to use. Since the following QAC decontamination materials are not labeled for use on fruit or personnel, it is recommended that care be taken to avoid contact with exposed fruit and personnel when applying these products. It is important that the users of these products always READ AND FOLLOW THE LABEL DIRECTIONS.

Please note that as of the revision date of this document, USDA/ APHIS has listed only the following approved materials for the decontamination of equipment exposed to citrus fruit or plant material originating from citrus black spot and sweet orange scab quarantined areas:

1. **Sodium hypochlorite solution at 200 ppm with pH of 6.0 – 7.5; or**
2. **Quaternary ammonium chloride (QAC) compound at 0.2 percent solution; or**
3. **Peroxyacetic acid (PAA) solution at 85 ppm PAA (indoor use only).**

Quaternary Ammonium Chloride 'QAC': The use of these compounds is recommended for vehicles, tools and equipment. **Do not use on personnel.** Apply all QAC products at 2000 ppm (0.2%) QAC solution to all equipment surfaces to the point of runoff (dilution ratio 1:108). Recommended contact time is 10 minutes. The following QAC products are approved for use in the decontamination of equipment, and carry EPA Section 3 registrations:

1.	**CITRA-SOLV/ CANKER-SOLV**	EPA Reg.No. 10324-72-72160.	(by FLO-TEC Inc.)		Product Discontinued
2.	**CS-170-C**	EPA Reg.No. 10324-72-44637.	(by Chem. Systems, FL)	FLO-TEC Inc.	(800) 335-6832
3.	**Canquat 110c**	EPA Reg.No. 10324-72-33354.		Fresh Mark Corporation	(352) 429-4171
4.	**Canquat 108**	EPA Reg.No. 1839-167-33354.		Fresh Mark Corporation	(352) 429-4171
5.	**BELQUAT 612**	EPA Reg.No. 10324-72-67829.		Bell Chem Corporation	(866) 877-2355
6.	**SAN-O-128**	EPA Reg.No. 10324-155-402.		Hill Manufacturing Co.	(800) 445-5123
7.	**ZEP X-1400**	EPA Reg.No. 10324-72-1270.		(by ZEP Manufacturing)	Product Discontinued
8.	**DECCOSAN 321**	EPA Reg.No. 10324-72-2792.		Decco Cerexagri, Inc.	(800) 237-2591
9.	**CPF QUAT**	EPA Reg.No. 10324-72-9367.		Theochem Laboratories, Inc.	(800) 237-2591
10.	**HDQ-22 High Dilution Quat**	EPA Reg.No. 1839-167-70671.	(by Chemstar Products)	Stepan Co.	(800) 457-7673
11.	**Canker Control Concentrate**	EPA Reg.No. 1839-167-22061.	(by Galloway Chemical)		Product Discontinued
12.	**C-Quat**	EPA Reg.No. 10324-72-73439.	(by Genesis Technologies)		No Contact Available
13.	**J & J Disinfectant Spray**	EPA Reg.No. 10324-72-32981.		J & J Chemical Co.	(800) 345-3303
14.	**Canker-Solv (neutral pH)**	EPA Reg.No. 10324-108-72160	(by FLO-TEC Inc.)		Product Discontinued
15.	**Canker-Solv Reduced Corrosion**	EPA Reg.No. 10324-109-72160.		FLO-TEC Inc.	(800) 335-6832
16.	**AP Neutral Disinfectant Cleaner**	EPA Reg.No. 1839-167-74709.		APCO Equipment & Supply	(863) 648-9774
17.	**Microdyne Extra**	EPA Reg.No. 10324-72-74098.		Eurochem International	(404) 696-9867
18.	**C-Quat Plus**	EPA Reg.No. 10324-72-73439.	(by Genesis Technologies)		No Contact Available
19.	**CANKERQUAT**	EPA Reg.No. 1839-167-6428.	(by International Chemical)		Discontinued/ No Contact Available
20.	**HDH Quat 108**	EPA Reg.No. 1839-167-83103		HDH Agri Products LLC	(352) 343-3484

ALTERNATIVE METHODS FOR DECONTAMINATION OF EQUIPMENT:

(A) Peracetic Acid: Only approved formulations may be used, only with injection systems, and may only be used on equipment including food contact surfaces. Rinsing is not required if used in accordance with product label. This material must be applied to reasonably clean equipment, follow label instructions for ratio. The following products are approved for use in decontamination of equipment, and carry EPA Section 3 registration:

1)	**VigorOx Citrus XA**	EPA Reg. No. 65402-6.	FMC Fresh Produce Technologies	(800) 845-0187
2)	**VigorOx XA-15**	EPA Reg. No. 65401-3.	FMC Fresh Produce Technologies	(800) 845-0187
3)	**Peroxy-Solv**	EPA Reg. No. 72160-1.	FLO-TEC Inc.	(800) 335-6832
4)	**JET-Oxide**	EPA Reg. No. 54289-3-81803	JET Harvest Solutions	(877) 866-5773
5)	**Peraclean 5**	EPA Reg. No. 54289-3	A Growing Alternative, Inc.	(828) 766-6179

APPROVED DECONTAMINATION PRODUCTS & METHODS

CITRUS HEALTH RESPONSE PROGRAM - COMPLIANCE AGREEMENT ATTACHMENT – SCHEDULE 11

ALTERNATIVE METHODS FOR DECONTAMINATION OF EQUIPMENT: (continued)

(B) Hydrogen Peroxide Products: Only approved formulations may be used, only with injection systems, and may only be used on equipment, including food contact surfaces. Rinsing is not required if used in accordance with product label. This material must be applied to reasonably clean equipment, at CHRP-approved ratio indicated. The following product is approved for use in decontamination of equipment, and carries EPA Section 3 registration:

1)	**OxiDate** Dilution ratio 1:200	EPA Reg. No. 70299-2.	BioSafe Systems	(888) 273-3088
2)	**Oxyfresh** Dilution ratio 1:200	EPA Reg. No. 33354-18	Fresh Mark Corporation	(352) 429-4171
3)	**HDH Peroxy** Dilution ratio 1:200	EPA Reg. No. 83103-1	HDH Agriproducts LLC	(352) 343-3484
4)	**Di-Oxy Solv Organic** Dilution ratio 1:200	EPA Reg. No. 72160-2	Flo-Tec Inc.	(800) 335-6832

(C) Copper-based products: Only approved formulations may be used, and only on equipment, vehicles, tools, clothing and shoes. Not for use on skin. This material must be applied to reasonably clean equipment at CHRP-approved ratio indicated. Dilute with clean water with the pH adjusted to <7.0 before mixing. The following product is approved for use in decontamination of equipment, and carries EPA Section 3 registration:

1)	**Eradicator** Dilution ratio 1:1000	EPA Reg. No. 66675-4.	The New Magna-Bon Corp.	(863) 357-0400

(D) Household Bleach (Chlorine) or Commercial Hypochlorite Products: A solution for decontamination of tools and equipment can be made using household bleach or other more concentrated hypochlorite products. Apply 200 ppm available chlorine to all surfaces to the point of run-off and maintain a pH of 6.0 to 7.5. Most solutions made with 1 ounce of household bleach to 1 gallon of water meet these criteria. This solution loses its strength rapidly, and should be made fresh daily. Bleach is not an effective decontaminant if used on dirty equipment.

(E) Hot Water and Detergent: Wash thoroughly with a hot water and detergent solution, under high pressure, at a minimum of 160 degrees F, covering all surfaces to the point of runoff.

(F) Steam: Apply steam, with minimum temperature of 160 degrees F, to all surfaces. This temperature must be maintained at the point of contact. Note: It has been proven to be extremely difficult to maintain the 160 degree F temperature in actual use. Applying steam with a combination of dry heat in an enclosed chamber has been successful.

SAFETY DATA SHEET

Best Scrub

Section 1. Identification

GHS product identifier : Best Scrub

Product code : 670

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation
400 Van Camp Road
Bowling Green, Ohio 43402
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec (800) 424-9300 24 hour

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Green. [Light]

Odor : Lemon-like.

Odor threshold : Not available.

pH : 9.8 to 10.8

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: Not applicable. [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.005

Solubility : Easily soluble in the following materials: cold water and hot water.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry not anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: α-hexylcinnamaldehyde; 2,4,6-trimethylcyclohex-3-enecarbaldehyde
TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Section 15. Regulatory information

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

⚠ **WARNING**: This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Europe : Not determined.

Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Malaysia : Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of printing : 8/27/2018

Date of issue/Date of revision : 8/27/2018

Date of previous issue : No previous validation

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	HCS
	Not controlled under WHMIS (Canada).	HCS Class: Irritating substance.

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	**AF315**
Synonym	Neutral pH Disinfectant/Deodorant/Detergent
Chemical Family	Not available.
Chemical Formula	Not applicable.
Manufacturer/ Supplier	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607 (419) 241-2156
TSCA	**TSCA Inventory: All components listed or are exempt from listing.**
DSL	**DSL : All components listed unless noted elsewhere on this MSDS**

Code	315
CAS #	Not applicable.
Validation Date	**7/22/2003**
Print Date	7/28/2003
In Case of Emergency	Chemtrec (800) 424-9300

Protective Clothing

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC_{50}/LD_{50}
1) Water	7732-18-5	>93	Not available.	Not available.
2) Quaternary Ammonium Chloride	68424-85-1	2	Not available.	Not available.
3) Isopropyl Alcohol	67-63-0	<2	TWA: 400 (ppm) TWA: 400 (ppm) from OSHA (PEL) [United States] STEL: 500 (ppm)	Not available.
4) Nonionic Surfactant	9016-45-9	<1	Not available.	Not available.
5) Perfume Oil	N/A	<1	Not available.	Not available.
6) Dye	N/A	<1	Not available.	Not available.

Section 3. Hazards Identification

Potential Acute Health Effects Harmful if swallowed. Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects Over-exposure by inhalation may cause respiratory irritation. Prolonged exposure may result in skin burns and ulcerations.

Carcinogenic Effects Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Flush eyes with large quantities of water. Seek medical attention if irritation persists.
Skin Contact	Flush with water. Seek medical attention if irritation persists.
Inhalation	N/A
Ingestion	Dilute with two glasses of water. Seek medical attention.

Section 5. Fire Fighting Measures

Products of Combustion	Not available.
Fire Fighting Media and Instructions	N/A
Special Remarks on Fire Hazards	N/A
Special Remarks on Explosion Hazards	N/A

Section 6. Accidental Release Measures

Small Spill and Leak	Safety glasses recommended.
Large Spill and Leak	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Call for assistance on disposal.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 7. Handling and Storage

Precautions	Keep away from incompatibles. S15- Keep away from heat
Incompatibility	None known.
Storage	Keep out of the reach of children. Not for use or storage in or around the home.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient to control airborne levels.
Personal Protection	
Eyes	Safety glasses.
Body	Lab coat.
Respiratory	Not applicable.
Hands	Not applicable.
Protective Clothing (Pictograms)	
Exposure Limits	**Isopropyl Alcohol** TWA: 400 (ppm) TWA: 400 (ppm) from OSHA (PEL) STEL: 500 (ppm) Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
pH	6.5 to 8.5 [Basic.]
Boiling/Condensation Point	212°F initial
Melting/Freezing Point	Not available.

Odor	Pleasant.
Taste	Not available.
Color	Blue. (Light.)

Critical Temperature	Not available.
Instability Temperature	Not available.
Specific Gravity	1 (Water = 1)
Vapor Pressure	20mm Hg @ 68°F
Vapor Density	>1 (Air = 1)
Volatility	90
VOC	Not available.
Evaporation Rate	(Water=1):<1
Dispersion Properties	See solubility in water.
Solubility	Easily soluble in cold water.
The Product is:	Non-flammable.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.
Explosion Hazards in Presence of Various Substances	Not applicable

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	None known.
Hazardous Decomposition Products	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Acute Effects on Humans	
Eyes	Eye irritant. May cause redness and swelling of the conjunctiva.
Skin	Defatting to skin on repeated contact.
Inhalation	N/A
Ingestion	May be irritating to the gastrointestinal system. Vomiting and diarrhea expected with large doses.
Chronic Effects on Humans	Over-exposure by inhalation may cause respiratory irritation. Prolonged exposure may result in skin burns and ulcerations.
Special Remarks on Toxicity to Animals	No additional remark.

Special Remarks on Chronic Effects on Humans	No additional remark.

Section 12. Ecological Information

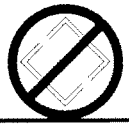
Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.

Section 14. Transport Information

DOT (U.S.A) (Pictograms)



TDG Classification Not controlled under TDG (Canada).

PIN UN, Proper Shipping Name, PG	Not applicable.
Maritime Transportation	Not available.
Special Provisions for Transport	Not applicable.

Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification) Not controlled under WHMIS (Canada).

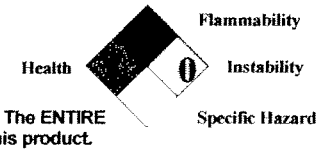
Regulatory Lists	CEPA DSL: No products were found.	
Other Regulations	Not available. or of its ingredients	
Other Classifications	**HCS (U.S.A.)**	HCS Class: Irritating substance.
	USA Regulatory Lists	California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Ethylene Oxide < 1 ppm California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Ethylene Oxide < 1 ppm

	Massachusetts RTK: Ethylene Oxide SARA 311/312: Isopropyl Alcohol; Quanternary AMmonium Chloride SARA 313: No Components were found
DSD (EEC)	This product is not classified according to the EU regulations.
International Regulations Lists	No products were found.

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	0
Physical Hazard	0

National Fire Protection Association (U.S.A.)



The Hazard Ranking systems presented on this MSDS provide only a quick reference for hazard information. The ENTIRE MSDS must be consulted to determine any specific hazards, First Aid measures, and PPE associated with this product.

Section 16. Other Information

Validated by CRushton on 7/22/2003.

Verified by CRushton.

Printed 7/28/2003.

Information Contact **Betco Corporation**
1001 Brown Avenue
Toledo, Ohio 43607

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Continued on Next Page

Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: ✓ COMMERCIAL SOLUTIONS® ULTRA CLOROX® GERMICIDAL BLEACH I

Description: CLEAR, LIGHT YELLOW LIQUID WITH CHLORINE ODOR

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. No. 67619-8 Sodium Hypochlorite Solution	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call 1-800-446-1014 For Transportation Emergencies, call Chemtrec 1-800-424-9300

II Health Hazard Data

DANGER: CORROSIVE. May cause severe irritation or damage to eyes and skin. Harmful if Swallowed. The following medical conditions may be aggravated by exposure to high concentrations of vapor or mist; heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease. Some clinical reports suggest a low potential for sensitization upon exaggerated exposure to sodium hypochlorite, particularly on damaged or irritated skin. Routine clinical tests conducted on intact skin with Clorox Liquid Bleach found no sensitization in the test subjects. Under normal consumer use conditions the likelihood of any adverse health effects are low.

FIRST AID:

EYE CONTACT: Rinse with plenty of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT: Wash skin thoroughly with soap and water.

INGESTION: Drink large amounts of water. DO NOT induce vomiting. Call a physician or poison control center immediately.

INHALATION: If breathing problems develop, remove to fresh air.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Sodium hypochlorite CAS # 7681-52-9	6.0 - 7.35%	Not established.
Sodium hydroxide CAS # 1310-73-2	< 0.2%	2 mg/m^3 TLV-STEL[a] 2 mg/m^3 PEL[b]

[a]TLV-STEL = ACGIH Threshold Limit Value - Short Term Exposure Limit
[b]PEL = OSHA Permissible Exposure Limit - Time Weighted Average

None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen list.

IV Special Protection and Precautions

Hygienic Practices: Wear safety glasses. With repeated or prolonged use, wear nitrile, neoprene, or butyl rubber gloves. Wash after contact with product. Avoid breathing vapors.

Engineering Controls: Use general ventilation to minimize exposure to vapor or mist.

Work Practices: Avoid eye and skin contact and inhalation of vapor or mist.

KEEP OUT OF THE REACH OF CHILDREN.

V Transportation and Regulatory Data

DOT: Not restricted per 49CFR172.101(c)(12)(iv).

IMDG: Not restricted per IMDG Code Page 0021 Paragraph 5.3.5.

IATA: Not restricted per IATA D.G.R. Special provision A3.

EPA - SARA Title III/CERCLA:
This product is regulated under Sections 311/312. This product contains no chemicals regulated under Section 313 and contains sodium hypochlorite and sodium hydroxide which are regulated under Section 304/CERCLA.

TSCA Status: All components of this product are on the TSCA Inventory.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material. For spills of multiple products, responders [illegible] hypochlorite. Breathing protection should be worn in enclosed, and/or poorly ventilated areas until hazard assessment is complete.

Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.

VII Reactivity Data

Stable under normal use and storage conditions. Strong oxidizing agent. Reacts with other household chemicals such as toilet bowl cleaners, rust removers, vinegar, acids or ammonia containing products to produce hazardous gases, such as chlorine and other chlorinated species. Prolonged contact with metal may cause pitting or discoloration.

VIII Fire and Explosion Data

Not flammable or explosive.

In a fire, cool containers to prevent rupture and release of sodium chlorate.

IX Physical Data

Boiling point	212°F100°C (decomposes)
Specific gravity (H_2O=1, 21°C)	~1.10
Solubility in water	Complete
pH	~11.4

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DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH

DATE PREPARED 4/02

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE AND PREPARATION

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
P.O. Box 53
Stillwater, MN 55082 USA
Phone: 1-651-430-2270
Fax: 1-651-430-3634

Polywater Europe BV
Mauritsplaat 126
NL-3012CD Rotterdam
Netherlands
Tel: +31 10 233 0578

Emergency Number: +1-651-430-2270

Product Name: Boom
Cleaning and Prewash Towels

Chemical Description: Water and polar solvent blend

Product Use: Clean and treat fiberglass boom-arms

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	EC #	Wt %
Citrus Terpenes	94266-47-4	304–454-3	10 - 25
n-Methyl-2-Pyrrolidone	872-50-4	212–828-1	10 - 25

This product contains no other reportable hazardous components under 29 CFR 1910.1200. This product contains no other reportable hazardous components under European Directives 91/55/EEC.

3. HAZARDS IDENTIFICATION

Emergency Overview: Combustible. Keep away from fire and flame. Use with adequate ventilation. Do not ingest. Avoid contact with skin. In case of eye contact, flush eyes with water. Keep out of reach of children.

Eye Contact: Direct eye contact with vapors or splashes may cause eye irritation, tearing, and, possibly, transient blurred vision. This irritation is minimal and expected to be transient.

Skin Contact: Skin irritant. Prolonged or repeated skin exposure can remove oils, causing redness, drying and cracking. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material.

Irritation and Sensitization Potential: This product in not a sensitizer.

Inhalation (Breathing): Concentrated solvent vapors may cause irritation of the nose and throat. Prolonged exposure to excessively high vapor concentrations can result in central nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue). Persons with impaired lung function may experience additional breathing difficulties due to the irritant properties of this material.

Ingestion (Swallowing): Material has low level of oral toxicity. Ingestion of large quantities may cause irritation of the digestive tract, or nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).

4. FIRST AID MEASURES

Eye Contact: If eye irritation from exposure to vapors develops, move to fresh air. Flush eyes with clean water. If irritation persists, seek medical attention. For direct eye contact, flush with large quantity of water for 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.

Inhalation (Breathing): If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.

Ingestion (Swallowing): Dilute with water and induce vomiting. Do not give fluids or induce vomiting if victim is unconscious or having convulsions. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention.

5. FIRE-FIGHTING MEASURES

Flash Point: 180°F / 82°C

Flammable Limits: Not Available

Autoignition Temperature: Not Available

Hazardous Decomposition and By-Products: Carbon monoxide, carbon dioxide, nitrogen oxides.

Extinguishing Media: Carbon Dioxide, Dry Chemical or Foam.

Special Precautions: Towelettes are difficult to ignite. If burning, smother or isolate from other flammable materials.

Unusual Hazards: If large quantities of cartoned towelettes are ignited, treat as petroleum solvent fire.

6. ACCIDENTAL RELEASE MEASURES

No spill hazard with saturated towel package.

7. HANDLING AND STORAGE

Keep cartons containing cleaner wipes closed. Keep towelettes cool, dry, and away from sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practice. All containers should be disposed of in an environmentally safe manner and in accordance with government regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Normal ventilation is adequate. If exposure exceeds recommended limits, respirator protection is recommended. Use a respirator or gas mask with cartridges for organic vapors (NIOSH approved) or use supplied air equipment.

Protective Gloves: The use of impermeable gloves (butyl rubber) is recommended to prevent drying and possible irritation.

Eye Protection:	Eye protection is recommended, especially if the material is used in ways where it could contact the eyes.
Other Protective Equipment:	It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Milky-white liquid.
Odor Threshold:	Not Available
Vapor Density (Air = 1):	Not Available
Specific Gravity (H_2O = 1):	1.0
Solubility in Water:	90% to complete
Boiling Point:	~212°F / 100°C
Freezing Point:	Not Available
Evaporation Rate:	<0.1 (n-butyl acetate = 1)
Vapor Pressure:	<1mm Hg @ 20°C
Coefficient of Water/Oil Distribution:	Not Available
pH:	Not Applicable
Volatiles (Weight %):	>95%
VOC Content:	466 gm/l

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	Avoid extreme heat and open flame.
Materials to Avoid:	Strong oxidizing agents.
Hazardous Decomposition and By-Products:	Carbon monoxide, carbon dioxide, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Toxicity to Animals:	Citrus Terpenes	LD_{50} (oral rabbit) > 5 g/kg LD_{50} (dermal rabbit) >5 g/kg
	n-Methyl-2-Pyrrolidone	LD_{50} (oral rat) 3914 mg/kg LD_{50} (dermal rabbit) 8 g/kg
Chronic Exposure:	Not Available	
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.	

Reproductive Toxicity:	Not Available
Mutagenicity:	Not Available
Teratogencity:	Not Available
Toxicologically Synergistic Products:	Not Available

12. ECOLOGICAL INFORMATION

Mobility:	No information available.
Bioaccumulation:	No information available.
Ecotoxicity:	No information available.
Aquatic Toxicity:	May be toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with National and Local Regulations.

14. TRANSPORTATION INFORMATION

UN Number:	Not Listed
UN Proper Shipping Name:	Not Applicable
Class and Subsidiary Risk:	Not Applicable
Packing Group:	Not Applicable
TDG:	Not Regulated
ICAO/IATA-DGR:	Not Regulated
IMDG:	Not Regulated
ADR/RID:	Not Regulated

15. REGULATORY INFORMATION

USA Federal and State

All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting	**Acute**	**Chronic**	**Fire**	**Pressure**	**Reactive**
	Yes	No	Yes	No	No

	CERCLA/SARA Sec 302		**SARA Sec. 313**
Components	**Hazardous Substance RQ**	**EHS TPQ**	**Toxic Release**
N-Methyl-2-Pyrrolidone*	No	No	Yes (1%)

*Boom Cleaning and Prewash Towel (B-1) contains <30% N-Methyl-2-Pyrrolidone.

European Union

Product is classified as hazardous according to European Directives 88/379/EEC and 67/548/EEC and EU Regulation (EC) No 1272/2008.

Risk Phrases:	R36/37/38: Irritating to eyes, respiratory system and skin. R61: May cause harm to the unborn child.
Safety Phrases:	S53: Avoid exposure
Symbol:	T: Toxic

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. It does not contain Substances of Very High Concern (SVHC).

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Classification:	B3
Canadian DSL:	All ingredients listed.

Australia

All components are listed on the AICS.
Hazardous according to criteria of NOHSC Australia.

Contact Information:
ADAPT Australia Pty. Ltd.
11 - 19 Global Drive
Tullamarine Victoria 3043
Telephone Number. 03 9330 0666

Emergency Telephone Number: 0421 277 889

16. OTHER INFORMATION

NFPA Ratings:	Health:	2
	Fire:	1
	Reactivity:	0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

Revision Date: May 17, 2013
Revision Number: 1
Reviewed By: S. H. Dahlke

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

MSDS Document

Product BOSS® 333 Triple Expanding Sealant

1. Chemical Product and Company Identification

Product BOSS® 333 Triple Expanding Sealant

Synonyms: 02455BR10, 01551BR10

MSDS ID BOSS333

Manufacturer
Accumetric, LLC
350 Ring Road
Elizabethtown, KY 42701

Phone Number
(270) 769-3385

Emergency Phone
CHEMTREC (800) 424-9300
CHEMTREC International (703) 527-3887

Revision Date 8/21/2013

2. Composition and Information on Ingredients

Ingredient	CAS Number	Weight %	ACGIH TLV	PEL	STEL
Polymeric diphenylmethane diisocyanate	9016-87-9	> 25 %	0.005 ppm	0.02 mg/m≈	
Isobutane	75-28-5	1% - 5%			
Propane	74-98-6	1% - 5%	1000 ppm	1000 ppm PEL	
Dimethyl ether	115-10-6	1% - 15%		400 ppm	

3. Hazard Identification

Overview
Extremely flammable.
Harmful by inhalation.
Irritating to eyes, respiratory systems and skin.
May cause sensitization by inhalation and skin contact.

Acute Effects/Symptoms of Overexposure
EYE CONTACT
Irritation of the eye tissue, lacrimation.

INHALATION
Dry/sore throat, coughing, irritation of respiratory tract, irritation of the nasal mucous membranes, runny nose.
Following symptoms may appear later: Inflammation of the respiratory tract, risk of lung edema, respiratory difficulties.

SKIN CONTACT
Tingling/irritation of skin.

Chronic Effects/Symptoms of Overexposure
May cause sensitization by skin contact. May cause sensitization by inhalation. Contains substance with uncertain carcinogenic properties (polymethylenepolyphenylisocyanate).

The following may also occur with continuous exposure/contact:
Body temperature rise, tremor, feeling of weakness, headache, skin rash/inflammation, may stain the skin, dry skin, risk of pneumonia.

4. First Aid Information

Eye Contact
Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Ingestion
DO NOT induce vomiting. DO NOT attempt to give anything by mouth to an unconscious person. If individual is conscious, give water to dilute stomach contents. Get prompt medical attention.

Inhalation
Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention.

Skin Contact
Rinse immediately with plenty of water. If irritation persists, seek medical attention.

5. Fire Fighting Measures

Flash Point < 32°F

Extinguishing Media
Carbon dioxide, BC powder, Polyvalent foam, Quantities of water

Unsuitable Extinguishing Media
None known

Special Exposure Hazards
On burning product releases toxic and corrosive gases/vapors: hydrogen chloride, carbon monoxide and carbon dioxide. Gas/vapor spreads at floor level, creating an ignition hazard. Gas/vapor flammable with air within explosion limits. Aerosol may explode when expose to flame or heat.

Special Fire Fighting Procedures
Dilute toxic gases with water spray. Take account of toxic fire fighting water. Do not move the load if expose to heat.

6. Accidental Release Measures

Steps to be taken in case of spill or release
Observe all personal protection equipment recommendations. Allow product to solidify and remove it by mechanical means. Remove uncured foam with acetone. Use appropriate containment to avoid environmental contamination.

Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable.

7. Handling and Storage

Handling
Observe very strict hygiene. Avoid contact with skin and eyes. In case of insufficient ventilation, keep naked flames/sparks away. Remove contaminated clothing immediately. Clean contaminated clothing before re-use.

Storage
Keep out of direct sunlight. Keep away from heat sources, ignition sources, acids and bases.

Storage temperature: < 122F (50C)

8. Exposure Controls and Personal Protection

Component Exposure Limits
Polymethylenepolyphenylisocyanate (9016-87-9)
TLV-TWA: --
TLV-STEL: --
TLV-Ceiling: --

Dimethyl ether (115-10-6)
TLV-TWA: --
TLV-STEL: --
TLV-Ceiling: --

Propane (74-98-6)
TLV-TWA: 2,500 ppm
TLV-STEL: --
TLV-Ceiling: --

Isobutane (75-28-5)
TLV-TWA: --
TLV-STEL: --

TLV-Ceiling: --

Occupational Exposure Controls
Use only in well ventilated areas.

Eye Protection
Use proper protection - safety glasses as a minimum.

Skin Protection
Chemically resistant gloves and suitable protective clothing.

Respiratory Protection
In case of insufficient ventilation, use respiratory protection with filter Type A.

9. Physical and Chemical Properties

Physical State	Aerosol
Specific Gravity	0.996
Density lbs/Gal.	8.3120226
Color/Appearance	Variable in color
Odor	Characteristic
pH	Not determined
Boiling/Cond. Point	Not determined
Melting/Freezing Point	Not determined
Solubility	Insoluble
Evaporation Rate	Not determined
VOC %	155 g/l (15% wt)
Viscosity	Not determined
Vapor Density	Not determined
Vapor Pressure	Not determined

Note
The above information is not intended for use in preparing product specifications. Contact Accumetric LLC before writing specifications.

10. Stability and Reactivity

Materials to Avoid
Keep away from heat sources, ignition sources, acids, and bases.

Conditions to Avoid - Reactivity
Unstable on exposure to heat.

Hazardous Decomposition Products
On burning: release of toxic and corrosive gases/vapors: hydrogen chloride, carbon monoxide and carbon dioxide.

On heating: release of toxic /combustible gases/vapors (hydrogen cyanide).

May polmerize on exposure to temperature rise.

May polymerize with a lot of compounds, ex; (Strong) bases and amines.

Reacts violently with (some) acids/bases.

11. Toxicological Information

Acute Toxicity
Polymethylenepolyphenylisocyanate (9016-87-9)
LD50 oral rat: > 10,000 mg/kg
LD50 dermal rabbit: > 5,000 mg/kg
LC50 inhalation rat: Not determined

Propane (74-98-6)
LD50 oral rat: Not determined
LD50 dermal rabbit: Not determined
LC50 inhalation rat: 513 mg/l/4 h
LC50 inhalation rat: 280,000 ppm/ 4 h

Isobutane (75-28-5)
LD50 oral rat: Not determined
LD50 dermal rabbit: Not determined
LC50 inhalation rat: 658 mg/l/4 h

Chronic Toxicity
Polymethylenepolyphenylisocyanate (9016-87-9)
Carcinogenicity (MAK): Category 3B
Mutagenicity (MAK): Not Listed
Teratogenicity (MAK): Group -
IARC Classification: 3

Dimethyl Ether (115-10-6)
Carcinogenicity (MAK): Not Listed
Mutagenicity (MAK): Not Listed
Teratogenicity (MAK): Group D
IARC Classification: Not Listed

12. Ecological Information

Ecotoxicity
No data available

Mobility
Insoluble in water

Persistence and Degradability
Biodegradation: Not determined
Water: No data available
Soil: Not determined

Bioaccumulative Potential
Not established

Other Adverse Effects
Effect on Ozone Layer: Not danagerous for the ozone layer (1999/45/EC)
Greenhouse Effect: No data available
Effect on Waste Water Purification: No data available

13. Disposal Considerations

Waste Disposal Method
We make no guarantee or warranty of any kind that the use or disposal of this product complies with all local, state, or federal laws. It is also the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable statutes.

This product is not known to be regulated under RCRA regulations, but contains SARA regulated substances. Disposal of unused portions of this product and process waste containing this product should be done only after a careful evaluation and in compliance with all federal, local and state laws.

14. Transportation Information

DOT Road Shipment Information
Hazard Class: 2.1
Identification Number: UN1950
Packing Group: -
Proper Shipping Name: AEROSOLS, flammable, n.o.s.
Label: 2.1

Air Shipment (IATA)
ICAO/IATA Class: 2.1
UN/ID Number: 1950
Label: 2.1
Packaging Group: -
Proper Shipping Name: AEROSOLS, flammable, n.o.s.

Ocean Shipment (IMDG)
Hazard Class: 2.1
UN Number: 1950
Label: 2.1
Packing Group: -
EMS Number: 2-13
Marine Pollutant: No

15. Regulatory Information

The contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status
All chemical substances found in this product comply with the Toxic Substances Control Act

inventory reporting requirements.

SARA Title III Section 302 Extremely Hazardous Substances
None

SARA Titre III Section 304 CERCLA Substances dangereuses
None

SARA Title III Section 313 Toxic Chemicals
Polymeric diphenylmethane diisocyanate (9016-87-9)

16. Other Information

Disclaimer
The data contained herein is based upon information that Accumetric LLC believes to be reliable. Users of this product have the responsibility to determine that suitability of use and to adopt all necessary precautions to ensure the safety and protection of property and persons involved in said use. All statements or suggestions are made without warranty, expressed or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

SECTION 1 PRODUCT COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION- GERANIOL EMULSION
TRADE NAME- BUG X FREE INSECT REPELLING LOTION SPRAY
PRODUCT USE- REPELLS INSECTS
Manufacturer's Name: **CoreTex Products, Inc.**
Address: 1850 Sunnyside Court
Bakersfield, CA 93308

Date Prepared: 08/19/08 Prepared By: Gene Schaffstall

DOT Hazard Classification: NON HAZARDOUS
Identity (trade name as used on label):
BUG X FREE REPELLING LOTION SPRAY

EMERGENCY TELEPHONE NUMBER-CHEMTEL-
1-800-255-3924

SECTION 2- HAZARDOUS INGREDIENTS

NON HAZARDOUS

SECTION 3- HAZARD IDENTIFICATION

HMIS	NFPH
HEALTH 1	HEALTH 1
FLAMMABILITY 0	FLAMMABILITY 0
REACTIVITY 0	REACTIVITY 0
SPECIAL 0	PERSONAL PROTECTION 0

SECTION 4- FIRST AID

SKIN: WASH WITH SOAP AND WATER
EYES: FLUSH WITH WATER FOR 15 MINUTES
INGESTION: GIVE SEVERAL LARGE GLASSES OF WATER
INHALATION: MOVE TO FRESH AIR

SECTION 5- FIRE FIGHTING MEASURES

FLASH POINT: NONE TO BOILING
COMBUSTION PRODUCTS: CARBON DIOXIDE,CARBON MONOXIDE
VEL: UNKNOWN
EXTINGUISHING MEDIA: WATER, FOAM
LEL: UNKNOWN
Auto Ignition Temperature: UNKNOWN

SECTION 6 - ACCIDENTAL RELEASE MEASURES

LARGE SPILLS- DIKE AREA, PUMP TO A INTACT CONTAINER
SMALL SPILLS- MOP UP
CLEANUP PROCEDURES- MOP UP AREA

SECTION 7 - HANDLING AND STORAGE

LEAVE IN CONTAINERS AND CARTONS. STORE IN A COOL DRY PLACE

SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

USE WITH ADEQUATE VENTILATION; APPLICATION TO THE FACE SHOULD BE BY SPRAYING ON THE HANDS AND THEN WIPING ONTO THE FACE

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE- THIN WHITE LIQUID	**VAPOR PRESSURE-17.2MM HG AT 68F**
ODOR- ROSE LIKE	**VAPOR DENSITY-.62**
PHYSICAL STATE- EMULSION	**S.G.97**
PH- NEUTRAL	**BOILING POINT 212 F**
MELTING POINT: N.A.	**SOLUBILITY: COMPLETE**

SECTION 10 - STABILITY & REACTIVITY

STABILITY- STABLE
INCOMPATIBILITIES- ACIDS, SALTS, QUATENARY COMPOUNDS
CONDITIONS TO AVOID- FREEZING
HAZARDOUS POLYMERIZATION- WILL NOT OCCUR

SECTION 11- TOXICOLOGICAL INFORMATION

INHALATION EFFECTS- NO EFFECT
SKIN CONTACT- NO EFFECT GENERALLY
EYE CONTACT- SLIGHT IRRITATION
MEDICAL CONDITIONS AGGRAVATED- EXISTING ASTHMA
OCCUPATIONAL EXPOSURE LIMITS- NONE ESTABLISHED

SECTION 12- ECOLOGICAL INFORMATION

PRODUCT IS COMPLETELY BIODEGRADABLE

SECTION 13- DISPOSAL INFORMATION

FLUSH TO SANITARY SEWER

SECTION 14- TRANSPORTATION INFORMATION

NON HAZARDOUS

SECTION 15- REGULATORY INFORMATION

SARA 313-NOT LISTED	AUSTRALIAN AICS- LISTED
TSCH INVENTORY- LISTED	JAPANESE ENGS- LISTED
EUROPEAN INVENTORY- LISTED	CALIFORNIA PROP. 65- LISTED
CANADIAN DSL- LISTED	

SECTION 16- OTHER INFORMATION

CoreTex Products, Inc.
1850 Sunnyside Court
Bakersfield, CA 93308

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. ** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

SECTION 1 PRODUCT COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION- INSECT REPELLING WRISTBAND
TRADE NAME- GERANIOL BUG X FREE GERANIOL INSECT REPELLING WRISTBAND
PRODUCT USE- REPELLS INSECTS
Manufacturer's Name: **CoreTex Products, Inc.**
Address: **1850 Sunnyside Court**
Bakersfield, CA 93308

DOT Hazard Classification: NON HAZARDOUS
Identity (trade name as used on label): BUG X FREE **INSECT REPELLING WRISTBANDS**

Date Prepared: 08/19/08 Prepared By: Gene Schaffstall

EMERGENCY TELEPHONE NUMBER-CHEMTEL-
1-800-255-3924

SECTION 2- HAZARDOUS INGREDIENTS

NON HAZARDOUS

SECTION 3- HAZARD IDENTIFICATION

HMIS
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0
SPECIAL NONE

NFPH
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0
PERSONAL PROTECTION NONE

SECTION 4- FIRST AID

SKIN: WASH WITH SOAP AND WATER
EYES: FLUSH WITH WATER
INGESTION: NOT LIKELY
INHALATION: NOT LIKELY

SECTION 5- FIRE FIGHTING MEASURES

FLASH POINT: N/A
COMBUSTION PRODUCTS: CARBON DIOXIDE,CARBON MONOXIDE
VEL: N/A
EXTINGUISHING MEDIA: USE THAT WHICH IS COMPATIBLE WITH THE ENVIRONMENT
LEL: N/A
Auto Ignition Temperature: UNKNOWN

SECTION 6 - ACCIDENTAL RELEASE MEASURES

LARGE SPILLS – SWEEP UP
SMALL SPILLS – SWEEP UP
CLEANUP PROCEDURES – PLACE IN DOMESTIC TRASH

SECTION 7 - HANDLING AND STORAGE

LEAVE IN CLOSED CONTAINER AND STORE IN A COOL, DRY PLACE

SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

N/A

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE- THIN SHORT PLASTIC BELT
ODOR- GERANIOL
PHYSICAL STATE- PLASTIC BELT
PH- N/A
MELTING POINT: 190 F

VAPOR PRESSURE - UNKNOWN
VAPOR DENSITY - UNKNOWN
S.G. .87
BOILING POINT N/A
SOLUBILITY: NOT SOLUBLE

SECTION 10 - STABILITY & REACTIVITY

STABILITY – STABLE AND NON REACTIVE

SECTION 11- TOXICOLOGICAL INFORMATION

INHALATION EFFECTS- NON TOXIC
SKIN CONTACT- NO EFFECT GENERALLY
EYE CONTACT- SLIGHT IRRITATION
MEDICAL CONDITIONS AGGRAVATED- EXISTING ASTHMA
OCCUPATIONAL EXPOSURE LIMITS- NONE ESTABLISHED

SECTION 12- ECOLOGICAL INFORMATION

POLYETHYLENE DOES NOT DEGRADE

SECTION 13- DISPOSAL INFORMATION

SWEEP UP AND DISPOSE IN DOMESTIC TRASH

SECTION 14- TRANSPORTATION INFORMATION

NON HAZARDOUS

SECTION 15- REGULATORY INFORMATION

SARA 313-NOT LISTED
TSCH INVENTORY- LISTED
EUROPEAN INVENTORY- LISTED
CANADIAN DSL- LISTED

AUSTRALIAN AICS- LISTED
JAPANESE ENGS- LISTED
CALIFORNIA PROP. 65- NOT LISTED

SECTION 16- OTHER INFORMATION

CoreTex Products, Inc.
1850 Sunnyside Court
Bakersfield, CA 93308

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. ** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

SECTION 1 PRODUCT COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION- TOWELETTE
TRADE NAME- BUG X FREE INSECT REPELLENT TOWELETTE
PRODUCT USE- REPELLS INSECTS
Manufacturer's Name: **CoreTex Products, Inc.**
Address: 1850 Sunnyside Court
Bakersfield, CA 93308

DOT Hazard Classification: NON HAZARDOUS
Identity (trade name as used on label): **BUG X FREE INSECT REPELLENT TOWELETTE**

Date Prepared: 11/05/2008 Prepared By: Gene Schaffstall

EMERGENCY TELEPHONE NUMBER-CHEMTEL-
1-800-255-3924

SECTION 2- HAZARDOUS INGREDIENTS

NON HAZARDOUS

SECTION 3- HAZARD IDENTIFICATION

HMIS	NFPH
HEALTH 1	HEALTH 1
FLAMMABILITY 0	FLAMMABILITY 0
REACTIVITY 0	REACTIVITY 0
SPECIAL 0	PERSONAL PROTECTION 0

SECTION 4- FIRST AID

SKIN: WASH WITH SOAP AND WATER
EYES: FLUSH WITH WATER FOR 15 MINUTES
INGESTION: NOT LIKELY
INHALATION: NOT LIKELY

SECTION 5- FIRE FIGHTING MEASURES

FLASH POINT: N.A.
COMBUSTION PRODUCTS: CARBON DIOXIDE,CARBON MONOXIDE
VEL: N.A.
EXTINGUISHING MEDIA: THAT USED IN THE ENVIRONMENT
LEL: N.A.
Auto Ignition Temperature: UNKNOWN

SECTION 6 - ACCIDENTAL RELEASE MEASURES

LARGE SPILLS- MOP UP AREA
SMALL SPILLS- MOP UP AREA
CLEANUP PROCEDURES- SCRUB AREA WITH SOAP AND WATER

SECTION 7 - HANDLING AND STORAGE

LEAVE IN CONTAINERS AND CARTONS. STORE IN A COOL DRY PLACE

SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

NOT APPLICABLE

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE- WHTE CLOTH	**BOILING POINT NA.A**
ODOR- ROSE LIKE	**MELTING POINT N.A**
PHYSICAL STATE- DAMP CLOTH	**S.G.NA.**
PH- NEUTRAL	**SOLUBILITY-NOT SOLUBLE**
MELTING POINT: N.A.	

SECTION 10 - STABILITY & REACTIVITY

STABILITY- STABLE
INCOMPATIBILITIES- STRONG OXIDANTS
CONDITIONS TO AVOID- FREEZING TEMPERATURES
HAZARDOUS POLYMERIZATION- WILL NOT OCCUR

SECTION 11- TOXICOLOGICAL INFORMATION

INHALATION EFFECTS- NO EFFECT
SKIN CONTACT- NO EFFECT
EYE CONTACT- SLIGHT IRRITATION
MEDICAL CONDITIONS AGGRAVATED- EXISTING ASTHMA
OCCUPATIONAL EXPOSURE LIMITS- NONE ESTABLISHED

SECTION 12- ECOLOGICAL INFORMATION

TOWELETTE WILL DEGRADE. DISPOSE IN DOMESTIC TRASH

SECTION 13- DISPOSAL INFORMATION

TOWELETTES CAN BE PLACED IN DOMESTIC TRASH

SECTION 14- TRANSPORTATION INFORMATION

NON HAZARDOUS

SECTION 15- REGULATORY INFORMATION

SARA 313-NOT LISTED	AUSTRALIAN AICS- LISTED
TSCH INVENTORY- LISTED	JAPANESE ENGS- LISTED
EUROPEAN INVENTORY- LISTED	CALIFORNIA PROP. 65- NOT LISTED
CANADIAN DSL- LISTED	

SECTION 16- OTHER INFORMATION

CoreTex Products, Inc.
1850 Sunnyside Court
Bakersfield, CA 93308

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. ** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

Safety Data Sheet

Version 1.01
Revision Date: 03/01/14

1. Product and Company Identification

Product Identifier

Product Name: Bug X Free Insect Repellent Spray

General Use: Insect Repellent

Recommended/Restricted Use

Identified Uses: Insect Repellent

Restrictions: N/A

Manufacturer

CoreTex Products, Inc.

1850 Sunnyside Ct.

Bakersfield, CA 93308 USA

(877) 684-5774

Emergency Contact Information

Phone Number: ChemTrec

Company Name: (800) 255-3924 - 24 Hours

Registration Information

EPA FIFRA 25(b) exempt product, 40 CFR 180.950

2. Hazard Identification

GHS Classification

Eye Irritant

Skin Sensitizer (Category 1)

GHS Label Elements, Including Precautionary Statements

Pictogram

Signal Word: Warning

Hazard Statement(s)

H317	May cause allergic skin reaction.

Precautionary Statement(s)

P302+P332+P352	If skin irritation occurs: rinse area thoroughly with soap and water. If irritation persist seek medical attention.
P305+P351+P338	If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P310	If swallowed: Give several large glasses of water. Call a POISON CENTER or doctor/physician if you feel unwell.

P304+P341 If inhaled: Existing asthma may be irritated if known floral allergies. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.

HMIS Classification

Health Hazard: 1

Flammability: 0

Physical Hazards: 0

NFPA Rating

Health Hazard: 1

Fire: 0

Reactivity Hazard 0

Other Hazards

N/A

3. Composition/Information on Ingredients

Chemical Name	Volume %	CAS Number
Geraniol	20.00	106-24-1
Soybean Oil	5.00	8001-22-7
Mint Oil	0.45	68917-18-0
Rosemary Oil	0.40	8000-25-7
Geranium Oil	0.05	8000-46-2

4. First Aid Measures

Description of First Aid Measures

Inhalation If irritation occurs, move person to fresh air.

Skin Contact Flush with warm water and soap. If irritation persists, seek medical attention.

Eye Contact Flush thoroughly with clean water for 15 minutes. If contact lenses are used, remove lenses and clean lenses thoroughly with clean water as well.

Ingestion Remove from mouth or throat. Give several glasses of water. Seek medical attention if feeling unwell.

5. Firefighting Measures

Suitable Extinguishing Media Water, Foam

Unsuitable Extinguishing Media N/A

Specific Hazards Arising from the Chemical Combustion Products: Carbon dioxide, carbon monoxide

Special Protective Actions for Firefighters N/D

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

N/A

Environmental Precautions

N/A

Methods and Materials for Containment and Cleaning Up

Small Spills: Mop Up

Large Spills: Dike area, pump to a intact container

Cleanup Procedures: Mop up

7. Handling and Storage

Precautions for Safe Handling

Leave in containers and cartons.

Conditions for Safe Storage, Including any Incompatibilities

Store in a cool dry place. Avoid freezing or abnormally high temperatures.

8. Exposure Controls/Personal Protection

Control Parameters

9. Physical and Chemical Properties

Physical State	Emulsion
Color	Off-White, Cream colored
Odor	Rose-like
Odor Threshold	N/D
pH	Neutral
Specific Gravity	0.975-0.985
Melting Point/Freezing Point	N/D
Initial Boiling Point	100°C
Flash Point	N/D
Flammability (solid/gas)	N/A
Vapor Pressure	17.2 mmHg @ 20°C
Vapor Density (Air=1)	0.61-0.63
Relative Density	N/D
Water Solubility	Complete
Auto-Ignition Temperature	N/A
Decomposition Temperature	N/D
Viscosity	N/D

10. Stability and Reactivity

Chemical Stability	Stable when stored in sealed container at normal temperatures and in a suitable location.
Possibility of Hazardous Reactions	Hazadous polymerization will not occur.
Conditions to Avoid	Avoid direct sunlight and moisture. Avoid heat and freezing conditions. Avoid storage with incompatible materials.

Incompatible Materials	Acids, salts, quarternary compounds.
Hazardous Decompostion Products	N/A

11. Toxicological Information

Acute Toxicity

Dermal LD_{50}	N/D
Oral LD_{50}	N/D
Inhalation Lc_{50}	N/D

Chronic

None known

Respiratory or Skin Sensitization

N/D

Carcinogenicity

This product is not classified as a carcinogen by NTP, IARC or OSHA

Reproductive Toxicity

None Known

Teratogenic Effects

None Known

Mutagenicity

None Known

12. Ecological Information

Environmental Data

No data available. Product completely biodegradable.

13. Disposal Considerations

Disposal Methods	Observe all Federal, Provincial, State and Municipal regulations. If possible, recycle empty container. Dispose of in sanitary landfill.

14. Transport Information

Non-hazardous.

15. Regulatory Information

OSHA Hazard Communication Standard	This material does not contain "Hazardous Chemicals" as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
TSCA Status	No data available.
SARA 313 Components	Not listed
California Proposition 65, Safe Drinking Water and Toxic Enforcement Act of 1986	This product contains no chemical(s) known to the State of California to cause cancer or other reproductive harm.

16. Other Information

Prepared By	CoreTex Products, Inc. 1850 Sunnyside Ct., Bakersfield, CA 93308 (877) 684-5774
Date of Latest Version	March 1, 2014
Sections of SDS Revised	N/A
Further Information	

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowlege and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. CoreTex Products, Inc. shall not be held liable for any damage resulting from handling or from contact with this product.

SAFETY DATA SHEET

Plant Food Systems, Inc.

Bullet ® HLB ®

EPA Reg. No 73806-3

Section 1—Identification

Product	**Bullet® HLB® Systemic Fungicide Bactericide**
Manufacturer	Plant Food Systems, Inc
Address:	2827 Union Street, Zellwood, FL 32798/P.O. Box 775, Zellwood, FL 32798
Phone:	(407) 889-7755 (800) 343-7775
24 Hour Emergency Contact	**CHEM TRAC (800) 424-9300**
Uses	Fungicide Bactericide

Section 2—Hazard Identification

Hazard	Product is not hazardous under normal conditions

Section 3—Composition

Ingredients	Components	CAS. No	Classification (GHS-US)
	Phosphorous Acid	13492-26-7	Skin Corr. 1B
	Phosphoric Acid	7758-11-4	Met. Corr. 1 Skin Corr. 1B

Section 4—First Aid Measures

Inhalation	Generally not considered hazardous. If vapors or mist cause irritation or distress, remove to fresh air.
Skin Contact	Protect skin from contact. May cause irritation. Flush skin thoroughly with water. If irritation persists, get medical attention.
Eye Contact	Avoid contact with eyes. Flush eyes immediately and thoroughly with water for 15 minutes. If Irritation persists get medical attention.
Ingestion	If ingested, do not induce vomiting, consult a physician immediately.
Chronic Health Hazards	No known chronic health hazards.

Section 5—Fire Fighting Measures

Fire Fighting Procedures	Dry Chemical, Carbon Dioxide, Foam, Water Class BC, ABC Fire Extinguisher

Section 6—Accidental Release Measure

Personal Precautions	Avoid splashing. Prevent exposure to spilled material with the use of proper PPE. Avoid breathing mist or vapor.
Protective Equipment	PPE should include gloves, goggles, face shield, and level D coverall

Section 6—Accidental Release Measure continued

Containment	Contain all spills and leaks to prevent discharge into the environment. If spilled, use appropriate absorbent material to absorb the spilled material and flush spilled area with water.

Section 7—Safe Handling and Storage

Precautions for Safe Handling and Storage	Store in a well ventilated cool dry place. Wash thoroughly after handling. Avoid overheating or freezing. Do not mix other materials in container.
Incompatibility	Strong oxidizers and reactive materials

Section 8—Exposure Controls/Personal Protection

Phosphoric Acid (7758-11-4)		
USA ACGIH	**ACGIH TWA (mg/m^3)**	**1 mg/m^3**
USA ACGIH	**ACGIH STEL (mg/m^3)**	**3 mg/m^3**

Engineering Controls	Eyewash facilities should be available
Personal Protective Equipment	Eyes-Chemical safety goggles or safety glasses Hands-Chemical resistant/impervious gloves Respiratory-None required under normal conditions.
Other information	Do not eat, drink or smoke during use

Section 9—Physical and Chemical Properties

Appearance and Odor	Clear to light golden, odorless liquid		
Boiling Point	Over 212°F	**Specific Gravity**	1.36
Freezing Point	<32°F	**Molecular Weight**	N/A
Vapor Density	Estimated Lighter then air	**Water Reactive**	N/A
Gallons per Ton	176	**Evaporative Rate**	N/A
Solubility in Water	Complete	**pH**	7.2-7.8
Flash Point	N/A	**Flammability**	N/A

Section 10—Stability and Reactivity

Reactivity	Product is not reactive under normal conditions
Stability	Product is stable under normal conditions
Hazardous Reactions	Hazardous polymerization will not occur
Conditions to Avoid	Elevated temperatures may cause container to rupture
Hazardous Decomposition Products	Phosphorous oxides, phosphine

Section 11—Toxicology Information

Routes of Exposure	Inhalation, ingestion, or skin/eye absorption
Symptoms and Signs of Exposure	Eyes & skin slightly irritating. Inhalation is not generally considered hazardous Ingestion may irritate or burn throat and may cause nausea or vomiting.
Long Term Effects	No known long term effects.
Toxicity	No limits have been set for this material.
Carcinogen	Has not been classified for its carcinogenic potential

Section 12—Ecological Information

Water	Low concentrations are not toxic to fish or other aquatic organisms.

Section 13—Disposal Considerations

Waste	This material is not considered a hazardous waste. Disposal must be done in accordance with local, state, and federal environmental regulations. Place waste in an appropriate container with correct labeling.

Section 14—Transport Information

DOT	Material is not hazardous as defined by 49 CFR 172.101 by the US Department of Transportation.
IMDG	This material is not classified as a Dangerous Good per the IMDG Code.

Section 15 — Regulatory Information

United States-SARA Hazardous Category	This product has been reviewed according to the EPA Hazard Categories promulgated under Section 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act (SARA) and is considered, under applicable definitions, to meet the following categories **Fire-**No **Pressure-**No **Reactive-**No **Chronic-**No

Section 16—Other Information

Date of Revision	May 2018 revision prepared in accordance with 29 CFR 1910.1200 Appendix D to meet Global Harmonization Standards.
Disclaimer	The information contained in this SDS refers only to the specific material designated and does not regulate to any process or use with any other material. The information is furnished free of charge and is based on data believed to be accurate and reliable as of the date hereof. It is intended for use by persons possessing technical knowledge at their own discretion and risk. Since actual use is beyond our control, no warranty, expressed or implied, and no liability is assumed by Plant Food Systems, Inc. in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents. Plant Food Systems, Inc. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

MATERIAL SAFETY DATA SHEET

Dielectric #7

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Dielectric #7
Product Number:	C417-0287
Product Use:	Silicone grease.
Manufacturer/Supplier:	Chance Company 210 North Allen Street Centralia, Missouri U.S.A.
Phone Number:	(573) 682-8465
Emergency Phone:	(573) 682-8465
Date of Preparation:	December 31, 2010

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: Avoid getting in eyes. May cause mild eye irritation.

Skin: Not expected to be a primary skin irritant. Prolonged and/or repeated skin contact with this product may cause irritation.

Ingestion: May be harmful if swallowed. May act as a laxative.

Inhalation: May cause respiratory tract irritation.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: May cause mild eye irritation with redness and tearing. Handling can cause dry skin.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Siloxanes and Silicones, di-methyl, methylphenyl	63148-52-7	60 - 100
Silica, amorphous, fumed	7631-86-9	10 - 30

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial

respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, water spray, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Scoop up material and place in a disposal container. Provide ventilation.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container tightly closed and dry.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits OSHA-PEL	ACGIH-TLV
Siloxanes and Silicones, di-methyl, methylphenyl	Not available.	Not available.
Silica, amorphous, fumed	80 $mg/m^3/\%SiO_2$	10 mg/m^3

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Translucent, grease-like consistency.
Color:	Not available.
Odour:	No odor.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	> 149 °C (> 300 °F)
Flash Point:	> 204 °C (> 400 °F)
Evaporation Rate:	< 1 (Ether = 1)
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	<5 mm Hg @ 25 °C (77 °F)
Vapor Density:	Not available.
Specific Gravity:	1.06
Solubility in Water:	Insoluble (<1%).
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	<0.5 %
VOC content, wt. %:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Traces of formaldehyde and other thermal decomposition products may form at temperatures above 150°C (302°F) in the presence of air.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Strong oxidizers.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD_{50} (oral)	LC_{50}
Siloxanes and Silicones, di-methyl, methylphenyl	Not available.	Not available.
Silica, amorphous, fumed	5000 mg/kg, rat	> 2.2 mg/L 1hr, rat

Eye: Avoid getting in eyes. May cause mild eye irritation. May cause mild eye irritation with redness and tearing.

Skin: Not expected to be a primary skin irritant. Prolonged and/or repeated skin contact with this product may cause irritation. Handling can cause dry skin.

Ingestion: May be harmful if swallowed. May act as a laxative.

Inhalation: May cause respiratory tract irritation.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Not hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Siloxanes and Silicones, di-methyl, methylphenyl	Not listed.
Silica, amorphous, fumed	I-3

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
Not regulated

TDG Classification
Not regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Siloxanes and Silicones, di-methyl, methylphenyl	Not listed.	Not listed.	Not listed.	Not listed.
Silica, amorphous, fumed	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	Canada DSL/NDSL	USA TSCA
Siloxanes and Silicones, di-methyl, methylphenyl	DSL	Yes.
Silica, amorphous, fumed	DSL	Yes.

HMIS - Hazardous Materials Identification System

Health - 1 **Flammability -** 1 **Physical Hazard -** 0 **PPE –** B

NFPA - National Fire Protection Association:

Health - 1 **Fire -** 1 **Reactivity -** 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Not controlled.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Expiry Date: December 31, 2013

Version #: 1.0

Prepared by: Nexreg Compliance Inc.
Phone: (519) 488-5126
www.nexreg.com

Safety Data Sheet

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Document Group:	11-4628-1	**Version Number:**	34.02
Issue Date:	04/24/15	**Supercedes Date:**	10/20/14

SECTION 1: Identification

1.1. Product identifier
3M™ Cable Preparation Kit CC-3 (Bag)

Product Identification Numbers
78-8018-9838-4, 80-6105-9300-8, 80-6116-0612-2

1.2. Recommended use and restrictions on use

Recommended use
Electrical, Solvent soaked pads for cleaning cable.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Flammable Liquid: Category 4.
Skin Corrosion/Irritation: Category 2.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (central nervous system): Category 3.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms

Hazard Statements
Combustible liquid.

Causes skin irritation.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Call a POISON CENTER or doctor/physician if you feel unwell.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Isoparaffinic Hydrocarbon	64742-48-9	50 - 70
Cotton pads	None	25 - 40
D-LIMONENE	5989-27-5	5 - 20

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:
No need for first aid is anticipated.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from sunlight. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Isoparaffinic Hydrocarbon	64742-48-9	Manufacturer determined	TWA:100 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Under normal use conditions, eye exposure is not expected to be significant enough to require eye protection.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Nitrile Rubber
Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile
Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of

a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid (Lint-free cloths soaked with liquid)
Specific Physical Form:	Cloth pads soaked in liquid in can or bag
Odor, Color, Grade:	citrus-like odor
Odor threshold	*No Data Available*
pH	7.0
Melting point	*No Data Available*
Boiling Point	380 ºF - 480 ºF
Flash Point	144 ºF [*Test Method:* Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	< 1 mmHg [@ 25 ºC]
Vapor Density	> 1 [*Ref Std:* AIR=1]
Specific Gravity	0.76 [*Ref Std:* WATER=1]
Solubility in Water	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	1.5 centipoise
Volatile Organic Compounds	Approximately 740 g/l
VOC Less H2O & Exempt Solvents	760 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Sparks and/or flames

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
Carbon monoxide	Not Specified

Carbon dioxide	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.
Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Isoparaffinic Hydrocarbon	Inhalation-Vapor		LC50 estimated to be 20 - 50 mg/l
Isoparaffinic Hydrocarbon	Dermal	Rabbit	LD50 > 3,000 mg/kg
Isoparaffinic Hydrocarbon	Ingestion	Rat	LD50 > 5,000 mg/kg
D-LIMONENE	Inhalation-Vapor (4 hours)	Mouse	LC50 > 3.14 mg/l
D-LIMONENE	Dermal	Rabbit	LD50 > 5,000 mg/kg
D-LIMONENE	Ingestion	Rat	LD50 4,400 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Isoparaffinic Hydrocarbon	Rabbit	Irritant
D-LIMONENE	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Isoparaffinic Hydrocarbon	Rabbit	No significant irritation
D-LIMONENE	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Isoparaffinic Hydrocarbon	Guinea pig	Not sensitizing
D-LIMONENE	Mouse	Sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Isoparaffinic Hydrocarbon	In vivo	Not mutagenic
Isoparaffinic Hydrocarbon	In Vitro	Some positive data exist, but the data are not sufficient for classification
D-LIMONENE	In Vitro	Not mutagenic
D-LIMONENE	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Isoparaffinic Hydrocarbon	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Isoparaffinic Hydrocarbon	Inhalation	Human and animal	Some positive data exist, but the data are not sufficient for classification
D-LIMONENE	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Isoparaffinic Hydrocarbon	Inhalation	Not toxic to development	Rat	NOAEL 2.4 mg/l	during organogenesis
D-LIMONENE	Ingestion	Not toxic to male reproduction	Rat	NOAEL 150 mg/kg/day	103 weeks
D-LIMONENE	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 750 mg/kg/day	premating & during gestation
D-LIMONENE	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 591 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Isoparaffinic Hydrocarbon	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Isoparaffinic Hydrocarbon	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Isoparaffinic Hydrocarbon	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 6.5 mg/l	4 hours
D-LIMONENE	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Isoparaffinic Hydrocarbon	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 4.6 mg/l	6 months
Isoparaffinic Hydrocarbon	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1.9 mg/l	13 weeks
Isoparaffinic Hydrocarbon	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.6 mg/l	90 days
Isoparaffinic Hydrocarbon	Inhalation	bone, teeth, nails, and/or hair | blood | liver | muscles	All data are negative	Rat	NOAEL 5.6 mg/l	12 weeks
Isoparaffinic Hydrocarbon	Inhalation	heart	All data are negative	Multiple animal species	NOAEL 1.3 mg/l	90 days
D-LIMONENE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 75 mg/kg/day	103 weeks
D-LIMONENE	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
D-LIMONENE	Ingestion	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | respiratory system	All data are negative	Rat	NOAEL 600 mg/kg/day	103 weeks

Aspiration Hazard

Name	Value
Isoparaffinic Hydrocarbon	Aspiration hazard
D-LIMONENE	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, Dispose of waste product in a permitted industrial waste facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit **http://3M.com/Transportinfo** or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 2 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: *2 **Flammability:** 2 **Physical Hazard:** 0 **Personal Protection:** B

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group:	11-4628-1	**Version Number:**	34.02
Issue Date:	04/24/15	**Supercedes Date:**	10/20/14

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MSDS Document

Product Caltran 60-30

1. Chemical Product and Company Identification

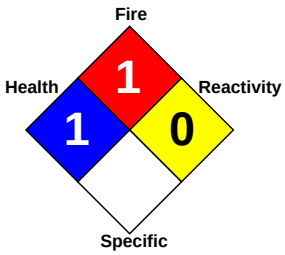
Product Caltran 60-30

Synonyms: 3020-00

MSDS ID 3020-00

Manufacturer
Calumet Lubricants Company
2780 Waterfront Pkwy E. Suite 200
Indianapolis, IN 46214

Contact Name
Anne Goldsmith
Phone Number
(317) 328-5660
Emergency Phone
CHEMTREC (800) 424-9300
CHEMTREC International (703) 527-3887
Revision Date 12/17/09



Health:	1
Fire:	1
Reactivity:	0
Specific	

2. Composition and Information on Ingredients

Ingredient	CAS Number	Weight %	ACGIH TLV	PEL	STEL
Light Naphthenic Hydrotreated Distillates (petroleum)	64742-53-6	>97.0 %	5 mg/m3	5 mg/m3	
BHT Blend Package	Trade Additive	>2.0 %			

3. Hazard Identification

Hazards
This product is a clear, pale-straw to water-white, viscous liquid. It has a light petroleum odor.

This product is slightly combustible (Flammability Class IIIB) but will burn. Heated product will produce colorless vapors. Heated vapors in the presence of an ignition source can be explosive if confined. When burned, the product will produce carbon monoxide and other asphyxiants during combustion.

Prolong unprotected exposure to this product will cause skin irritation. Material splashed in eyes will irritate tissues. Gently flush material from eyes with clean water. Remove product soaked clothing and wash with mild soap.

As with any petroleum product, avoid mixing this product with strong oxidizers.

Carcinogen listed by: National Toxicology Program (NO)
I. A. R. C. (NO)
OSHA (NO)
ACGIH (NO)
This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Personnel with pre-existing skin disorders should avoid contact with this product.

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

4. First Aid Information

First Aid Measures
EYES
If splashed into eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, seek medical attention.

SKIN
In case of skin contact, remove any contaminated clothing and wash skin with soap and water. Launder or dry-clean clothing before reuse. If irritation or redness develops and persists, seek medical attention.

INGESTION
Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

INHALATION
If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek medical attention.

5. Fire Fighting Measures

Flash Point >293 F

FP Method ASTM D92

Fire Fighting
FIRE AND EXPLOSION HAZARDS
Slightly combustible. OSHA/NFPA Class IIIB Combustible Liquid. If heated above its flash point will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to ignition source. Mists or sprays may be flammable below oils normal flash point. Keep away from extreme heat or open flame.

EXTINGUISHING MEDIA
Foam, water spray (fog), dry chemical, carbon dioxide, and vaporizing liquid type extinguishing agents mat all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", 13th Edition (2001):

Use water spray, dry chemical, foam or carbon dioxide to extinguish the fire. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS
Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in the case of incomplete combustion.

FLAMMABLE PROPERTIES
FLASH POINT: >293°F >145°C COC ASTM D92
AUTO IGNITION: 574°F >301°C
FLAMMABILITY CLASS: IIIB

6. Accidental Release Measures

Release Measures
Extinguish any open flames and remove heat sources.

This material will float on water and will be transported by stormwater runoff. Spills to the ground should be immobilized and removed immediately. Spills to watercourses such as stormdrains, sewers, ditches, streams, ponds, etc. must be contained with dikes, dams, floating booms, pads, etc. as appropriate. Remove trapped product immediately.

Spills that enter a waterbody must be immediately reported to the USEPA's National Response Center at (800)546-2972.
Check with your local and state regulators regarding their reporting requirements.

Cleanup personnel should wear appropriate personnel protective equipment including impervious clothing, rubber boots, gloves, and splash goggles.

7. Handling and Storage

Handling and Storage

HANDLING AND STORAGE PRECAUTIONS
Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. Wash thoroughly after handling.

WORK/HYGIENIC PRACTICES
Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

"EMPTY" CONTAINER WARNING
"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Do not attempt to refill or clean containers since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

8. Exposure Controls and Personal Protection

Exposure

VENTILATION
Use local exhaust to capture vapor, mists or fumes, if necessary. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive vapors in air. No smoking, use of flame, or other ignition sources.

EYE/FACE PROTECTION
Use safety glasses or splash goggles when eye contact may occur. Have suitable eyewash water available.

SKIN PROTECTION
Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious clothing. Acceptable materials for gloves are polyvinyl chloride, neoprene, nitrile, polyvinyl alcohol, and viton.

RESPIRATORY PROTECTION
Normally not required if adequate ventilation. If occupational exposure limits are exceeded, wear NIOSH/MSHA approved apparatus.

OTHER/GENERAL PROTECTION
If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard).

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY VOLUME
Light Hydrotreated Naphthenic Distillate (petroleum) CAS NUMBER: 64742-53-6	Exposure Limits: OIL MIST OSHA PEL MIST 5 MG/M3 8 HRS ACGIH TLV MIST 5 MG/M3 8 HRS	>97.0
BHT Blend Package CAS NUMBER: Mixture	Exposure Limits: N/A	>2.0

9. Physical and Chemical Properties

Physical State	liquid
Specific Gravity	0.8833
Density lbs/Gal.	7.37
Color/Appearance	L0.5/pale straw to water white
Odor	petroleum
pH	neutral
Melting/Freezing Point	-66 F -55 C
Solubility	negligible
Viscosity	2.18 cSt @ 100 C

APPEARANCE: Clear, pale straw to water white, viscous liquid
ODOR: Light bland petroleum
PHYSICAL STATE: Liquid
BOILING POINT: N/A°F N/A°C
MELTING POINT: -66°F (D97) -55°C (D97)
VAPOR PRESSURE: N/A
VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY: 0.8833
MOLECULAR WEIGHT: N/A
SOLUBILITY (H2O): negligible
PERCENT VOLATILES: nil
VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT: N/A
EVAPORATION RATE: 1000X slower than ethyl ether
pH: essentially neutral
VISCOSITY: 8.18 CST at 40°C

Physical data may vary slightly to meet specifications.

10. Stability and Reactivity

Stability/Reactivity
STABILITY: Stable. Will not react violently with water.

CONDITIONS TO AVOID
Sources of ignition.

INCOMPATIBLE MATERIALS
Strong oxidizers such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc., as this presents a serious explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS
Combustion may produce carbon monoxide and other asphyxiants.

HAZARDOUS POLYMERIZATION: will not occur

11. Toxicological Information

Toxicological
ACUTE STUDIES
Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

EYE EFFECTS
Product contacting the eyes may cause eye irritation.

SKIN EFFECTS
Prolonged or repeated skin contact with this product tends to remove skin oils, possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

ACUTE ORAL EFFECTS
Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

ACUTE INHALATION EFFECTS
Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

In accordance with the current OSHA Hazard Communication Standard criteria, this product does not require a cancer hazard warning. This is because the product is formulated from base stocks which are severely hydrotreated, severely solvent extracted, and/or processed by mild hydrotreatment and extraction. Alternatively, it may consist of components not otherwise affected by IARC criteria, such as atmospheric distillates or synthetically derived materials, and as such is not characterized by current IARC classification criteria.

12. Ecological Information

Ecological Info
If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures

resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

This product is rapidly biodegradable. Biodegradation is possible within 90 to 120 days in aerobic environments at temperatures above 70°F (21°C).

13. Disposal Considerations

Disposal
Product, as supplied, does not meet the characteristics of a hazardous waste as defined in 40 CFR 261.21-24. If mixed with other products, waste mixture must be characterized. DO NOT dispose of this product in drains or storm sewers. DO NOT dispose of this product in a landfill without prior solidification. Waste product should be recycled. Consider waste brokering.

14. Transportation Information

Transport Info
PROPER SHIPPING NAME: Not regulated by DOT
HAZARD CLASS: Not applicable
DOT IDENTIFICATION NUMBER: N/A
DOT SHIPPING LABEL: Not regulated by DOT

15. Regulatory Information

U.S. FEDERAL REGULATORY INFORMATION
SARA 302 Threshold Planning Quantity: NOT APPLICABLE
SARA 304 Reportable Quantity : NOT APPLICABLE
SARA 311 Categories: Immediate (Acute) Health Effects --N
Delayed (Chronic) Health Effects --Y
Fire Hazard --N
Sudden Release of Pressure Hazard--N
Reactivity Hazard --N

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.
EPA Hazard Classification Code: NOT APPLICABLE
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Phenol - CAS No. 108-95-2 CERCLA RQ = 1000 lbs.

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION
No chemicals in this product exceed the De Minimus reporting level established by SARA Title III, Section 313 and 40 CFR 372.

CANADIAN REGULATORY INFORMATION
This product is listed on the Canadian (DSL) Domestic Substances List.
WHMIS Classification: NOT CONTROLLED

16. Other Information

Disclaimer

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES
The information contained herein is based upon data believed to be reliable and reflects our best professional judgment. Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein and assume no responsibility regarding the suitability of this information for the user's intended purpose or for the consequence of its use. Each individual should make a determination as to the suitability of the information for his/her particular purpose(s).

Supercedes MSDS dated: 12/16/2005

Revisions: 05/04/2004 - revised formula, total revision to reflect new format
12/16/2005 - updated autoignition temperature, pour point, and viscosity
12/17/2009 - updated product typicals

Material Safety Data Sheet

Carbon Dioxide

Section 1. Chemical product and company identification

Product name : Carbon Dioxide

Supplier : AIRGAS INC., on behalf of its subsidiaries
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Product use : Synthetic/Analytical chemistry.

Synonym : Carbonic Acid, Carbon Dioxide Liquid, Carbon Dioxide, Refrigerated Liquid, Carbonic Anhydride

MSDS # : 001013

Date of Preparation/Revision : **1/20/2012.**

In case of emergency : 1-866-734-3438

Section 2. Hazards identification

Physical state : Gas or Liquid.

Emergency overview : WARNING!

GAS:
CONTENTS UNDER PRESURE.
MAY CAUSE RESPIRATORY TRACT, EYE, AND SKIN IRRITATION.
CAN CAUSE TARGET ORGAN DAMAGE.
Do not puncture or incinerate container.
Can cause rapid suffocation.
LIQUID:
MAY CAUSE RESPIRATORY TRACT, EYE, AND SKIN IRRITATION.
CAN CAUSE TARGET ORGAN DAMAGE.
Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
May cause severe frostbite.

Do not puncture or incinerate container. Avoid contact with eyes, skin and clothing. May cause target organ damage, based on animal data. Wash thoroughly after handling. Keep container closed. Avoid breathing gas. Use with adequate ventilation.

Contact with rapidly expanding gas, liquid, or solid can cause frostbite.

Target organs : May cause damage to the following organs: lungs.

Routes of entry : Inhalation Dermal Eyes

Potential acute health effects

Eyes : Moderately irritating to eyes. Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Skin : Moderately irritating to the skin. Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Inhalation : Moderately irritating to the respiratory system.

Ingestion : Ingestion is not a normal route of exposure for gases. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Potential chronic health effects

Chronic effects : May cause target organ damage, based on animal data.

Target organs : May cause damage to the following organs: lungs.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Carbon Dioxide	124-38-9	100	**ACGIH TLV (United States, 2/2010).** STEL: 54000 mg/m³ 15 minute(s). STEL: 30000 ppm 15 minute(s). TWA: 9000 mg/m³ 8 hour(s). TWA: 5000 ppm 8 hour(s). **NIOSH REL (United States, 6/2009).** STEL: 54000 mg/m³ 15 minute(s). STEL: 30000 ppm 15 minute(s). TWA: 9000 mg/m³ 10 hour(s). TWA: 5000 ppm 10 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 9000 mg/m³ 8 hour(s). TWA: 5000 ppm 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** STEL: 54000 mg/m³ 15 minute(s). STEL: 30000 ppm 15 minute(s). TWA: 18000 mg/m³ 8 hour(s). TWA: 10000 ppm 8 hour(s).

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : As this product is a gas, refer to the inhalation section.

Section 5. Fire-fighting measures

Flammability of the product : Non-flammable.

Products of combustion : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.

Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : Immediately contact emergency personnel. Stop leak if without risk. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Handling : Wash thoroughly after handling. High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Keep container closed. Avoid contact with skin and clothing. Use with adequate ventilation. Avoid contact with eyes. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cryogenic liquids. Prevent entrapment of liquid in closed systems or piping without pressure relief devices. Some materials may become brittle at low temperatures and will easily fracture.

Storage : Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).
For additional information concerning storage and handling refer to Compressed Gas Association pamphlets P-1 Safe Handling of Compressed Gases in Containers and P-12 Safe Handling of Cryogenic Liquids available from the Compressed Gas Association, Inc.

Section 8. Exposure controls/personal protection

Engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

When working with cryogenic liquids, wear a full face shield.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Insulated gloves suitable for low temperatures

Personal protection in case of a large spill : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Full chemical-resistant suit and self-contained breathing apparatus should be worn only by trained and authorized persons.

Product name

Carbon Dioxide	
Carbon dioxide	**ACGIH TLV (United States, 2/2010).** STEL: 54000 mg/m³ 15 minute(s). STEL: 30000 ppm 15 minute(s). TWA: 9000 mg/m³ 8 hour(s). TWA: 5000 ppm 8 hour(s). **NIOSH REL (United States, 6/2009).** STEL: 54000 mg/m³ 15 minute(s). STEL: 30000 ppm 15 minute(s). TWA: 9000 mg/m³ 10 hour(s). TWA: 5000 ppm 10 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 9000 mg/m³ 8 hour(s). TWA: 5000 ppm 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** STEL: 54000 mg/m³ 15 minute(s). STEL: 30000 ppm 15 minute(s). TWA: 18000 mg/m³ 8 hour(s). TWA: 10000 ppm 8 hour(s).

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 44.01 g/mole

Molecular formula : C-O2

Melting/freezing point : Sublimation temperature: -79°C (-110.2 to °F)

Critical temperature : 30.9°C (87.6°F)

Vapor pressure : 830 (psig)

Vapor density : 1.53 (Air = 1) Liquid Density@BP: Solid density = 97.5 lb/ft3 (1562 kg/m3)

Specific Volume (ft ^{3}/lb) : 8.7719

Gas Density (lb/ft ^{3}) : 0.114

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
Carbon dioxide	LC50 Inhalation Gas.	Rat	470000 ppm	30 minutes

IDLH : 40000 ppm

Chronic effects on humans : May cause damage to the following organs: lungs.

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Toxicity of the products of biodegradation : not available

Environmental fate : Not available.

Environmental hazards : This product shows a low bioaccumulation potential.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1013 UN2187	CARBON DIOXIDE Carbon dioxide, refrigerated liquid	2.2	Not applicable (gas).		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg
TDG Classification	UN1013 UN2187	CARBON DIOXIDE Carbon dioxide, refrigerated liquid	2.2	Not applicable (gas).		**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75
Mexico Classification	UN1013 UN2187	CARBON DIOXIDE Carbon dioxide, refrigerated liquid	2.2	Not applicable (gas).		-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Section 15. Regulatory information

United States

U.S. Federal regulations :

TSCA 8(a) IUR: This material is listed or exempted.
United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Carbon dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Carbon dioxide: Sudden release of pressure, Immediate (acute) health hazard, Delayed (chronic) health hazard

State regulations :

Connecticut Carcinogen Reporting: This material is not listed.
Connecticut Hazardous Material Survey: This material is not listed.
Florida substances: This material is not listed.
Illinois Chemical Safety Act: This material is not listed.
Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.
Louisiana Reporting: This material is not listed.
Louisiana Spill: This material is not listed.
Massachusetts Spill: This material is not listed.
Massachusetts Substances: This material is listed.
Michigan Critical Material: This material is not listed.
Minnesota Hazardous Substances: This material is not listed.
New Jersey Hazardous Substances: This material is listed.
New Jersey Spill: This material is not listed.
New Jersey Toxic Catastrophe Prevention Act: This material is not listed.
New York Acutely Hazardous Substances: This material is not listed.
New York Toxic Chemical Release Reporting: This material is not listed.
Pennsylvania RTK Hazardous Substances: This material is listed.
Rhode Island Hazardous Substances: This material is not listed.

Canada

WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: This material is listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

United States

Label requirements :

GAS:
CONTENTS UNDER PRESURE.
MAY CAUSE RESPIRATORY TRACT, EYE, AND SKIN IRRITATION.
CAN CAUSE TARGET ORGAN DAMAGE.
Do not puncture or incinerate container.
Can cause rapid suffocation.
LIQUID:
MAY CAUSE RESPIRATORY TRACT, EYE, AND SKIN IRRITATION.
CAN CAUSE TARGET ORGAN DAMAGE.
Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
May cause severe frostbite.

Canada

Label requirements : Class A: Compressed gas.

Hazardous Material Information System (U.S.A.) :

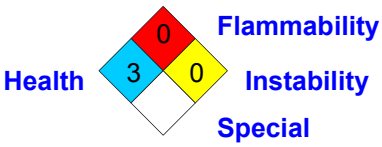
Health	*	1
Flammability		0
Physical hazards		0

liquid:

Health		3
Fire hazard		0
Reactivity		0
Personal protection		

National Fire Protection Association (U.S.A.) :

liquid:



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

PGC 40148

The Procter & Gamble Company
P&G Household Care
Fabric & Home Care Innovation Center
5299 Spring Grove Avenue
Cincinnati, OH 45217-1087

MATERIAL SAFETY DATA SHEET

MSDS #: **RQ0700470 & RQ0702618**
Supersedes: **FH/A/2006/KRKS-6LDGV3**

Issue Date: October, 2007
Issue Date: February, 2007

SECTION I - PRODUCT IDENTIFICATION

Identity: Automatic Dishwashing Detergent Gel **Finished Product**

Brands: CASCADE PURE RINSE GEL (Lemon, Baking Soda Fresh, Orchard Splash, Summertime Showers, Orange Scents and Cascade with Extra Bleach Action)

P&G Telephone Number: 800-765-5516

or call Local Poison Control Center or your physician.

Emergency (24 hour) Telephone Number: CHEMTREC 1-800-424-9300

SECTION II - HAZARDS IDENTIFICATION

Potential Health Hazards (Acute and Chronic): (See Section 11 for more information)

Ingestion: Harmful if swallowed or put in mouth. Esophageal irritation possible with exposure to more than one mouthful. Do not induce emesis or further irritation may result from re-exposure.

Eye Contact: Contact may cause irritation.

Skin Contact: Irritating to skin.

Inhalation: None.

Signs and Symptoms of Exposure:

Ingestion: Irritation of the mouth and gastrointestinal tract, with nausea, vomiting, and diarrhea. Substantial ingestions may produce hematemesis and possibly moderate to severe gastrointestinal irritation. Esophageal stricture formation is not expected.

Eye Contact: May cause stinging, tearing, itching, swelling, and/or redness of the eyes.

Skin Contact: May result in transient skin irritation (redness, swelling) upon prolonged contact with undiluted material.

Inhalation: None known.

Medical Conditions Generally Known to be Aggravated by Exposure: None known.

Potential Environmental Effects: (See Section 12 for more information)

SECTION III - COMPOSITION AND INGREDIENTS

Ingredients/Chemical Name: Water softeners (potassium and/or sodium complex phosphates, and/or carbonate salts), cleaning agent (chlorine bleach), dishware, flatware, and dishwasher protection agents (sodium and potassium silicates), water, thickening agent, buffering agent, stabilizing agent, colorant, and perfume.

This mixture, when tested as a whole, is considered an eye and skin irritant within the meaning of the OSHA Hazard Communication Standard.

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200. and/or WHMIS under the HPA:

Chemical Name	Common Name	CAS No.	Composition Range	LD50/LC50
Hypochlorous acid, sodium salt	Bleach	7681-52-9	5-10%	8.91 g/kg (rats, oral)
Sodium hydroxide	Caustic soda	1310-73-2	1-5%	500 mg/kg (10% solution, rats, oral)

SECTION IV – FIRST AID INFORMATION

First Aid Procedures:

Ingestion: Give water or milk to dilute. Call a physician. Do not induce emesis.

Eye Contact: Flush eyes thoroughly with water.

Skin Contact: Rinse exposed area with water.

Inhalation: Move exposed individual to fresh air.

Note to Physician: (if applicable)

Other: Consumer product package has the following precautionary statement: CAUTION: IRRITANT. HARMFUL IF SWALLOWED OR PUT IN MOUTH. MAY IRRITATE EYES OR SKIN. KEEP OUT OF REACH OF CHILDREN. CAUTION: DANGEROUS FUMES FORM WHEN MIXED WITH OTHER PRODUCTS. Do notmix with dishwashing liquids, ammonia, or other cleaning products. Do not get in eyes. Do not get on skin or clothing. Do not breathe fumes. KEEP OUT OF REACH OF CHILDREN. Do not let young children use bottle or touch product in dishwahser. Not for hand dishwashing. Do not reuse bottle. Screw on protective cap tightly after use. FIRST AID TREATMENT: Contains potassium and sodium hydroxides, sodium silicate and chlorine bleach. If swallowed or gets in mouth, rinse mouth, give a glassful of water or milk and call a Poison Control Center or doctor immediately. DO NOT INDUCE VOMITING. If in eyes, rinse will with water for 15 minutes. If on skin, rinse well with water.

SECTION V - FIRE FIGHTING INFORMATION

Flash Point (Method Used): > 200°F / >93°C PM Closed Cup

Flammable Properties: Product is non flammable.

Upper Flammable Limit: N/A

Lower Flammable Limit: N/A

Explosive Limits: UEL: N/K LEL: N/K

Auto-ignition Temperature: N/K

Hazardous Combustion Products: Dangerous hypochlorous acid and irritating chloramine gas are released.

Explosion Data (Sensitivity to Mechanical Impact): N/A

Explosion Data (Sensitivity to Static Discharge): N/A

Extinguishing Media:

Suitable: CO_2, water and/or dry chemical

Unsuitable: N/K

Protection of Firefighters:

Specific Hazards Arising from the Material: Acids and ammonia. Contact with aluminum or iron-containing compounds may release hydrogen gas.

Protective Equipment and Precautions for Firefighters: Normal fire fighting gear.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Prior to exposure, cover any exposed skin and eyes. Peel off and wash any clothing that becomes wet with the product.

Environmental Precautions: Products covered by this MSDS, in their original form, when disposed as waste, are corrosive hazardous waste, D002, according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state/provincial and federal regulations.

Methods for Containment: Contain the spill. Try to prevent from reaching waterway or sewer. Cascade Pure Rinse Gel is a RCRA corrosive hazardous waste, D002, because of its high pH.

Methods for Cleanup: Do not landfill. Hazardous waste treatment to reduce pH is necessary prior to disposal.

Other Information: (if applicable)

SECTION VII – HANDLING AND STORAGE

Precautions To Be Taken in Handling: None

Precautions To B e Taken in Storage: None

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:
Sodium Hypochlorite (CAS# 7681-52-9) WEEL STEL (15 min.) is:2 mg/m3
Sodium Hydroxide (CAS# 1310-73-2) OSHA Z-1 PEL is:2 mg/m3

Engineering Controls:

Personal Protective Equipment (PPE): Cover clothes as spills will bleach your clothing.

Eye/Face Protection: For splash protection use chemical goggles. Eye wash fountain is desirable.

Skin Protection: Protective gloves (rubber, neoprene) should be used for any direct contact.

Respiratory Protection: None required with normal use.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance (color, physical form, shape): Creamy white or yellow thick, viscous gel.

Odor: Products are perfumed.

Odor Threshold: N/K

Physical State: Liquid gel at 20°C.

Vapor Pressure (mm Hg): N/K

Vapor Density (Air=1): N/K

Boiling Point: N/K

Partition Coefficient (n-octanol/water): N/K

Flash Point (Method Used): > 200 °F / >93°C PM Closed Cup

Solubility in Water: Miscible with water. Contains small amounts of insoluble, colloidal size particles.

Decomposition Temperature: N/K

Evaporation Rate (nBuOAc=1): N/K

Specific Gravity/Density: 1.35 g/cc

Melting/Freezing Point: N/K

Reserve Alkalinity: ~3.0

pH (1% solution): 11.0 (neat): ~12.6

Volatile Organic Compound (VOC): Not applicable - Product not regulated for VOC Content at State or Federal level.

SECTION X - STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid: Acids and ammonia. Contact with aluminum or iron-containing compounds may release hydrogen gas.

Incompatible Materials: Acids, ammonia, aluminum and iron-containing compounds.

Hazardous Decomposition Products: Dangerous hypochlorous acid and irritating chloramine gas are released.

Possibility of Hazardous Reactions: Contact with aluminum or iron-containing compounds may release hydrogen gas.

SECTION XI - TOXICOLOGICAL INFORMATION

Irritating to eye and skin after prolonged, direct contact.

LD50: estimated acute oral LD50 (rats) >2g/kg

ED50: Not necessarily strongly emetic.

Chronic Effects: No chronic health effects reported.

Target Organs: No target organs reported.

Carcinogenicity: NTP: No **IARC:** No

SECTION XII - ECOLOGICAL INFORMATION

Under normal and foreseeable uses, there are no concerns for aquatic organisms exposed to product ingredients at the anticipated environmental concentrations. Relevant environmental data have been reviewed and these indicate that the product is compatible with down-the-drain disposal routes, including municipal wastewater treatment processes and septic tank systems. This product is intended for dispersive use and should not be disposed of directly into the environment.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Disposal is to be performed in compliance with federal, state/provincial and local regulations. Products covered by this MSDS, in their original form, when disposed as waste, are corrosive hazardous waste, D002, according to Federal RCRA regulations (40 CFR 261).

Non Household Setting (federal): Do not landfill. Hazardous waste treatment to reduce pH is necessary prior to disposal.

Non Household Setting (California): Waste Code 561

Household Use: Product used in household may be disposed of in refuse or in sewer.

SECTION XIV - TRANSPORT INFORMATION

Transportation Information – Products covered by this MSDS, in their original form, are regulated for transportation.

For finished packaged product transported by ground (US DOT): **Consumer Commodity ORM-D.**

For finished packaged product transported by sea (IMDG): **UN3266, Corrosive liquid, basic, inorganic, n.o.s. (sodium hypochlorite, sodium hydroxide), 8, PG III, Ltd Qty.**

For finished packaged product transported by air (IATA): **DO NOT SHIP. Finished product packaging does not meet air transport requirements.**

SECTION XV - REGULATORY INFORMATION

UNITED STATES - FEDERAL

All intentionally-added components of this product are listed on the US TSCA Inventory.

EPA Registration Number: Not Applicable

SARA chemicals: This product contains the following SARA 313/302/304/311/312 chemicals:

SARA 311: Sodium Tripolyphosphate (CAS# 7758-29-4) (10-30%)
Sodium Hypochlorite (CAS# 7681-52-9) (5-10%)
Sodium Hydroxide (CAS# 1310-73-2) (1-5%)

STATES:

This product is not subject to warning labeling under California Proposition 65.

California Registration Number: Not Applicable.

State Right-to-Know and CERCLA:

The following ingredients present in the finished product are listed on state right-to-know lists or state worker exposure lists:

Ingredient	CAS#	Level	States					CERCLA RQ
Sodium Tripolyphosphate	7758-29-4	10-30%	IL	MA	NJ	PA		5000 lbs
Sodium Hydroxide	1310-73-2	1-5%	IL	MA	NJ	PA	RI	1000 lbs
Sodium Hypochlorite	7681-52-9	5-10%	IL	MA	NJ	PA		100 lbs

Canada

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all information required by the Controlled Products Regulations.

SECTION XVI - OTHER INFORMATION

Perfumes contained within the products covered by this MSDS comply with appropriate IFRA guidance.

P&G Hazard Rating:

Health:	2	4=EXTREME
Flammability:	0	3=HIGH
Reactivity:	2	2=MODERATE
		1=SLIGHT
		0=NOT SIGNIFICANT

*N/A. - Not Applicable

*N/K. - Not Known

Data supplied is for use only in connection with occupational safety and health.

DISCLAIMER: This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumed no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

SAFETY DATA SHEET

1. Identification

Product identifier **CCA Treated Wood**

Other means of identification

SDS number 92-KPC

Recommended use Preservative Treated Wood for various weather protected and exterior uses.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Koppers Performance Chemicals Inc.
Address 1016 Everee Inn Rd., Griffin, GA 30224
Telephone number 770-233-4200
Contact person Regulatory Manager, KPC Inc.
Emergency Telephone Number CHEMTREC 1-800-424-9300
E-mail KPCmgrsds@koppers.com

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Carcinogenicity (inhalation) Category 1A

OSHA defined hazards Combustible dust

Label elements

Signal word Danger

Hazard statement May cause cancer by inhalation. May form combustible dust concentrations in air.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Wear protective gloves/protective clothing/eye protection/face protection. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices.

Response If exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use water fog, foam, carbon dioxide, dry chemical for extinction. Collect spillage.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5
Wood	N/A	<85

Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits. Depending on the additives applied to the treating solution, this wood may also contain < 1% of CLEANWOOD MOLD INHIBITOR. CLEANWOOD contains the following ingredients, which are present in the wood at ppm levels. None of these ingredients are classified as carcinogens. 5-Chloro-2-methyl-4-isothiazolin-3-one (CAS 26172-55-4):13-27 ppm 2-Methyl-4-isothiazolin-3-one (CAS 2682-20-4):5-10 ppm Magnesium chloride (CAS 7786-30-3):12-24 ppm Magnesium nitrate (CAS 10377-60-3): 22-45 ppm Depending on the additives applied to the treating solution, this wood may also contain <1% WEATHERSHIELD, a non-hazardous wax emulsion.

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.
Eye contact	Do not rub eye. Immediately flush eye(s) with plenty of water. Remove any contact lenses and open eyelids wide apart. If irritation persists get medical attention.
Ingestion	Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.
Most important symptoms/effects, acute and delayed	Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.
Indication of immediate medical attention and special treatment needed	If one ounce of treated wood dust per 10 lbs. of body weight are ingested, acute arsenic intoxication is a possibility.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder. Apply extinguishing media carefully to avoid creating airborne dust.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance. Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use only non-sparking tools. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Do not burn preserved wood. Do not use preserved wood as Mulch. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, spark, open flames and other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA

Components	Type	Value	Form
Wood Dust (CAS N/A)	PEL	5 mg/m3	Respirable dust.
		15 mg/m3	Total fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Trivalent Chromium (CAS 1308-38-9)	PEL	0.5 mg/m3

ACGIH

Components	Type	Value	Form
Wood Dust (CAS N/A)	TWA	1 mg/m3	Inhalable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value
Arsenic Pentoxide (CAS 1303-28-2)	TWA	0.01 mg/m3
Trivalent Chromium (CAS 1308-38-9)	TWA	0.5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Arsenic Pentoxide (CAS 1303-28-2)	Ceiling	0.002 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Copper Oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
Trivalent Chromium (CAS 1308-38-9)	TWA	0.5 mg/m3	
Wood Dust (CAS N/A)	TWA	1 mg/m3	Dust.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Arsenic Pentoxide (CAS 1303-28-2)	35 µg/l	Inorganic arsenic, plus methylated metabolites, as As	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear dust-resistant safety goggles with side shields where there is danger of eye contact.

Skin protection

Hand protection When handling wood, wear leather or fabric gloves.

Other Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH–approved respirator if there is a potential for exposure to dust exceeding exposure limits (See 29 CRF 1910.134, respiratory protection standard).

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations If wood dust contacts the skin, workers should wash the affected areas with soap and water. Clothing contaminated with wood dust should be removed, and provisions should be made for the safe removal of the chemical from the clothing. Persons laundering the clothes should be informed of the hazardous properties of wood dust. A worker who handles wood dust should thoroughly wash hands, forearms, and face with soap and water before eating, using tobacco products, using toilet facilities, applying cosmetics, or taking medication. Workers should not eat, drink, use tobacco products, apply cosmetics, or take medication in areas where wood dust is handled, or processed.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Color Yellow/green.

Odor Wood odor.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Combustible solid.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Highly insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Density	As wood.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Minimize dust generation and accumulation. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Wood dust, treated or untreated, is irritating to the nose, throat and lungs. Prolonged or repeated inhalation of wood dusts may cause respiratory irritation, recurrent bronchitis and prolonged colds. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals. Prolonged exposure to wood dusts by inhalation has been reported to be associated with nasal and paranasal cancer.
Skin contact	Handling may cause splinters. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals.
Eye contact	Dust may irritate the eyes.
Ingestion	Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting. If one ounce of treated wood dust per 10 lbs. of body weight are ingested, acute arsenic intoxication is a possibility. Certain species of wood and their dusts may contain natural toxins, which can have adverse effects in humans.
Symptoms related to the physical, chemical and toxicological characteristics	Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust may irritate the eyes.

Respiratory or skin sensitization

ACGIH Sensitization

Wood Dust (CAS N/A)	Dermal sensitization Respiratory sensitization

Respiratory sensitization Exposure to wood dusts can result in hypersensitivity,

Skin sensitization Exposure to wood dust can result in the development of contact dermatitis. The primary irritant dermatitis resulting from skin contact with wood dusts consist of erythema, blistering, and sometimes erosion and secondary infections occur.

Germ cell mutagenicity No component of this product present at levels greater than or equal to 0.1% is identified as a mutagen by OSHA.

Carcinogenicity May cause cancer by inhalation.
This classification is based on an increased incidence of nasal and paranasal cancers in people exposed to wood dusts.

IARC Monographs. Overall Evaluation of Carcinogenicity

Arsenic Pentoxide (CAS 1303-28-2)	1 Carcinogenic to humans.
Trivalent Chromium (CAS 1308-38-9)	3 Not classifiable as to carcinogenicity to humans.
Wood Dust (CAS N/A)	1 Carcinogenic to humans.

NTP Report on Carcinogens

Arsenic Pentoxide (CAS 1303-28-2)	Known To Be Human Carcinogen.
Wood Dust (CAS N/A)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2)	Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not likely, due to the form of the product.

Chronic effects Chronic exposure to wood dusts can result in pneumonitis, and coughing, wheezing, fever and the other signs and symptoms associated with chronic bronchitis. Individuals with pre-existing disease in or a history of ailments involving the skin, kidney, liver, respiratory tract, eyes, or nervous system are at a greater than normal risk of developing adverse effects from woodworking operations with this product.

Further information The effects of industrial exposure to the chrome-copper-arsenic preservative used to treat CCA wood has been evaluated in three independent epidemiology studies. In each case the authors concluded that workers exposed on a daily basis to these preservatives were at no increased risk of death or disease as a result of their exposure.
Recreational exposure to children using CCA treated wood playground equipment has been evaluated. The results of this study indicate that the amount of arsenic transferred from the wood surface to the child is within the normal variation of total arsenic exposure to children and that the maximum risks of skin cancer associated with the exposure approximates the skin cancer risk from the sunlight experienced during play periods. Leaf, stem, and fruit of grape plants grown adjacent to CCA treated wood poles did not take up preservative components from the poles above background levels (limit of detection 0.2 and 0.05 ppm for chrome and arsenic, respectively).

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available on bioaccumulation.

Mobility in soil The product is insoluble in water.

Mobility in general The product is not volatile but may be spread by dust-raising handling.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. DO NOT BURN! Ash may be toxic and a hazardous waste; combustion vapors may be toxic. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste P List: Reference

Arsenic Pentoxide (CAS 1303-28-2)	P011

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are listed on or exempt from the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2)	Cancer Liver Skin Respiratory irritation Nervous system Acute toxicity

CERCLA Hazardous Substance List (40 CFR 302.4)

Arsenic Pentoxide (CAS 1303-28-2)	LISTED
Copper Oxide (CAS 1317-39-1)	LISTED
Trivalent Chromium (CAS 1308-38-9)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Arsenic Pentoxide	1303-28-2	1		100	10000

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)

US. New Jersey Worker and Community Right-to-Know Act

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)
Wood Dust (CAS N/A)

US. Pennsylvania Worker and Community Right-to-Know Law

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)
Wood Dust (CAS N/A)

US. Rhode Island RTK

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Wood Dust (CAS N/A)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-April-2015
Revision date -
Version # 01

Further information

HMIS® is a registered trade and service mark of the NPCA.
E - Safety Glasses, Gloves, Dust Respirator

PERCENTAGE OF HAZARDOUS INGREDIENTS COMPONENT %:

0.25 pcf
Arsenic Pentoxide 0.3%, Copper Oxide 0.15%, Chromium Trioxide 0.4%, Wood Dust* 84.28%
0.4 pcf
Arsenic Pentoxide 0.4%, Copper Oxide 0.2%, Chromium Trioxide 0.6%, Wood Dust* 83.98%
0.6 pcf
Arsenic Pentoxide 0.6%, Copper Oxide 0.3%, Chromium Trioxide 0.9%, Wood Dust* 83.47%
1.0 pcf
Arsenic Pentoxide 1.0%, Copper Oxide 0.6%, Chromium Trioxide 1.4%, Wood Dust* 82.45%
2.5 pcf
Arsenic Pentoxide 2.6%, Copper Oxide 1.3%, Chromium Trioxide 3.3%, Wood Dust* 78.88%

* This represents the maximum amount of wood dust that could be generated if the wood was completely machined.

The above percentages are based on the applicable retention, a wood density of 32 pcf., and a moisture contact of 15%, the above values may vary due to the variability of treatment and the natural variability of wood.

HMIS® ratings

Health: 1*
Flammability: 1
Physical hazard: 0
Personal protection: E

NFPA ratings

Disclaimer

Koppers Performance Chemicals Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

SAFETY DATA SHEET

1. Identification

Product Identifier **CCA Treated Wood**

Other means of identification

SDS number 92-KPC

Recommended use Preservative Treated Wood for various weather protected and exterior uses.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor Information

Company Name	Koppers Performance Chemicals Inc.	Langdale Forest Products Co.
Address	1016 Everee Inn Road Griffin, GA 30224	1202 Madison Highway Valdosta, GA 31601
Telephone number	770-233-4200	229-333-2500
Contact person	Regulatory Manager, KPC Inc.	
Emergency Telephone Number	CHEMTREC 1-800-424-9300	
E-mail	KPCmgrsds@koppers.com	

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Carcinogenicity (inhalation) Category 1A

OSHA defined hazards Combustible dust

Label elements

Signal word Danger

Hazard statement May cause cancer by inhalation. May form combustible dust concentrations in air.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Wear protective gloves/protective clothing/eye protection/face protection. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices.

Response If exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use water, fog, foam, carbon dioxide, dry chemical for extinction. Collect spillage.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise Classified (HNOC) None known

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5
Wood	N/A	<85

Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits. Depending on the additives applied to the treating solution, this wood may also contain <1% of mold inhibitors, <1% of a non-hazardous oil emulsion, and <% of a colorant.

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.
Eye contact	Do not rub eye. Immediately flush eye(s) with plenty of water. Remove any contact lenses and open eyelids wide apart. If irritation persists get medical attention.
Ingestion	Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.
Most important symptoms/ Symptoms/effects, acute and delayed	Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species, may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.
Indication of immediate medical attention and special treatment needed	If one ounce of treated wood dust per 10 lbs of body weight are ingested, acute arsenic intoxication is a possibility.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water for, Foam, Carbon dioxide (CO2). Dry chemical powder. Apply extinguishing media carefully to avoid creating airborne dust.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance. Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use only non-sparking tools. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep away from heat /sparks/ open flames/hot surfaces.–No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Do not burn preserved wood. Do not use preserved wood as Mulch. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, spark, open flames and other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. – OSHA

Components	Type	Value	Form
Wood Dust (CAS N/A)	PEL	5 mg/m3	Respirable dust.
		15 mg/m3	Total fraction.

U.S. – OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Trivalent Chromium (CAS 1308-38-9)	PEL	0.5 mg/m3	

ACGIH

Components	Type	Value	Form
Wood Dust (CAS N/A)	TWA	1 mg/m3	Inhalable fraction.

U.S. ACGIH Threshold Limit Values

Components	Type	Value	Form
Arsenic Pentoxide (CAS 1303-28-2)	TWA	0.01 mg/m3	
Trivalent Chromium (CAS 1308-38-9)	TWA	0.5 mg/m3	

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Arsenic Pentoxide (CAS 1303-28-2)	Ceiling	0.002 mg/m3	

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Copper Oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
Trivalent Chromium (CAS 1308-38-9)			
Wood Dust (CAS N/A)	TWA	0.5 mg/m3	
	TWA	1 mg/m3	Dust.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Arsenic Pentoxide (CAS 1303-28-2)	35 µg/l	Inorganic arsenic, plus methylated metabolites, as As	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/Face protection Wear dust-resistant safety goggles with side shields where there is danger of eye contact.

Skin protection

Hand protection When handling wood, wear leather or fabric gloves.

Other Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH-approved respirator if there is a potential for exposure to dust exceeding exposure limits (See 29 CRF 1910.134, respiratory protection standard.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene Considerations If wood dust contacts the skin, workers should wash the affected areas with soap and water. Clothing contaminated with wood dust should be removed, and provisions should be made for the safe removal of the chemical from the clothing. Persons laundering the clothes should be informed of the hazardous properties of wood dust. A worker who handles wood dust should thoroughly wash hands, forearms, and face with soap and water before eating, using tobacco products, using toilet facilities, applying cosmetics, or taking medication. Workers should not eat, drink, use tobacco products, apply cosmetics, or take medication in areas where wood dust is handled, or processed.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Color Yellow/green.

Odor Wood odor.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Combustible solid.

Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not available.
Flammability limit – upper (%)	Not available.
Explosive limit – lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Solubility(ies)	
Solubility (water)	Highly insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Density	As wood.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Minimize dust generation and accumulation. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Wood dust, treated or untreated, is irritating to the nose, throat and lungs. Prolonged or repeated inhalation of wood dusts may cause respiratory irritation, recurrent bronchitis and prolonged colds. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals. Prolonged exposure to wood dusts by inhalation has been reported to be associated with nasal and paranasal cancer.
Skin contact	Handling may cause splinters. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals.
Eye contact	Dust may irritate the eyes.
Ingestion	Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting. If one ounce of treated wood dust per 10 lbs. of body weight are ingested, acute arsenic intoxication is a possibility. Certain species of wood and their dusts may contain natural toxins, which can have adverse effects in humans.
Symptoms related to the physical, chemical and Toxicological characteristics	Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust may irritate the eyes.

Respiratory or skin sensitization

ACGIH Sensitization

Wood (CAS N/A)	Dermal sensitization
	Respiratory sensitization

Respiratory sensitization	Exposure to wood dusts can result in hypersensitivity.
Skin sensitization	Exposure to wood dust can result in the development of contact dermatitis. The primary irritant dermatitis resulting from skin contact with wood dusts consist of erythema, blistering, and sometimes erosion and secondary infections occur.
Germ cell mutagenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a mutagen by OSHA.
Carcinogenicity	May cause cancer by inhalation. This classification is based on increased incidence of nasal and paranasal cancers in people exposed to wood dusts.

IARC Monographs. Overall Evaluation of Carcinogenicity

Arsenic Pentoxide (CAS 1303-28-2)	1 Carcinogenic to humans.
Trivalent Chromium (CAS 1308-38-9)	3 Not classifiable as to carcinogenicity to humans.
Wood (CAS N/A)	1 Carcinogenic to humans.

NTP Report on Carcinogens

Arsenic Pentoxide (CAS 1303-28-2)	Known To Be Human Carcinogen.
Wood Dust (CAS N/A)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2)	Cancer

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	Chronic exposure to wood dusts can result in pneumonitis, and coughing, wheezing, fever and the other signs and symptoms associated with chronic bronchitis. Individuals with pre-existing disease in or a history of ailments involving the skin, kidney, liver, respiratory tracts, eyes, or nervous system are at a greater than normal risk of developing adverse effects from woodworking operations with the product.
Further information	The effects of industrial exposure to the chrome-copper-arsenic preservative used to treat CCA wood has been evaluated in three independent epidemiology studies. In each case the authors concluded that workers exposed on a daily basis to these preservatives were at no increased risk of death or disease as a result of their exposure. Recreational exposure to children using CCA treated wood playground equipment has been evaluated. The results of this study indicate that the amount of arsenic transferred from the wood surface to the child is within the normal variation of total arsenic exposure to children and that the maximum risks of skin cancer associated with the exposure approximates the skin cancer risk from the sunlight experienced during play periods. Leaf, stem, and fruit of grape plants grown adjacent to CCA treated wood poles did not take up preservative components from the poles above background levels (limit of detection 0.2 and 0.05 ppm for chrome and arsenic, respectively).

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available on bioaccumulation.
Mobility in soil	The product is insoluble in water.
Mobility in general	The product is not volatile but may be spread by dust-raising handling.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. DO NOT BURN! Ash may be toxic and a hazardous waste; combustion vapors may be toxic. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste P List: Reference

Arsenic Pentoxide (CAS 1303-28-2) P011

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are listed on or exempt from the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2)	Cancer
	Liver
	Skin
	Respiratory irritation
	Nervous system
	Acute toxicity

CERCLA Hazardous Substance List (40 CFR 302.4)

Arsenic Pentoxide (CAS 1303-28-2)	LISTED
Copper Oxide (CAS 1317-39-1)	LISTED
Trivalent Chromium (CAS 1308-38-9)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard – No
Delayed Hazard – Yes
Fire Hazard – Yes
Pressure Hazard – No
Reactivity Hazard – No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity lower value (pounds)	Threshold planning quantity, upper value (pounds)
Arsenic Pentoxide	1303-28-2	1		100	10000

SARA 311/312 Hazardous Chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated

US state regulations

US. Massachusetts RTK – Substance List

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)

US. New Jersey Worker and Community Right-to-Know Act

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)
Wood Dust (CAS N/A)

US. Pennsylvania Worker and Community Right-to-Know Act

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)
Wood Dust (CAS N/A)

US. Rhode Island RTK

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)

US. California Propostition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Propostition 65 – Carcinogens & Reproductive Toxicity (CRT): Listed substance

Wood Dust (CAS N/A)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-April-2015
Revision date 01-June-2015
Version # 02

Further information

HMIS® is a registered trade and service mark of the NPCA.
E – Safety Glasses, Gloves, Dust Respirator

PERCENTAGE OF HAZARDOUS INGREDIENTS COMPONENT %:

0.25 pcf
Arsenic Pentoxide 0.3%, Copper Oxide 0.15%, Chromium Trioxide 0.4%, Wood Dust* 84.28%
0.4 pcf
Arsenic Pentoxide 0.4%, Copper Oxide 0.2%, Chromium Trioxide 0.6%, Wood Dust* 83.98%
0.6 pcf
Arsenic Pentoxide 0.6%, Copper Oxide 0.3%, Chromium Trioxide 0.9%, Wood Dust* 83.47%
1.0 pcf
Arsenic Pentoxide 1.0%, Copper Oxide 0.6%, Chromium Trioxide 1.4%, Wood Dust* 82.45%
2.5 pcf
Arsenic Pentoxide 2.6%, Copper Oxide 1.3%, Chromium Trioxide 3.3%, Wood Dust* 78.88%

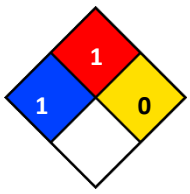
* This represents the maximum amount of wood dust that could be generated if the wood was completely machined.

The above percentages are based on the applicable retention, a wood density of 32 pcf. and a moisture content of 15%, the above values may vary due to the variability of treatment and the natural variability of wood.

HMIS® ratings

Health: 1*
Flammability: 1
Physical hazard: 0
Personal protection: E

NFPA ratings



Disclaimer

Koppers Performance Chemicals Inc. cannot anticipate all conditions under which this information and its product, or the products of the other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage, and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 03/12/2015 Date of issue: 03/12/2015 Supersedes Date: 03/09/2012 Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Substance

Product Name: Sodium Bicarbonate

CAS No: 144-55-8

Formula: $NaHCO_3$

Synonyms: Baking Soda

Intended Use of the Product

Food Ingredient, Pharmaceutical, Household and Personal Care Product, Water Treatment, General Industrial Use.

Name, Address, and Telephone of the Responsible Party

Company

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328
www.churchdwight.com

Emergency Telephone Number

Emergency Number : For Medical Emergency: 1-888-234-1828, For Chemical Emergency: 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

The consumer variant of this product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC) and the Food and Drug Administration (FDA). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and FDA, and as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Classification of the Substance or Mixture

Classification (GHS-US) Not classified

Label Elements

GHS-US Labeling No labeling applicable

Other Hazards Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Prolonged contact with dust can produce mechanical irritation.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name : Sodium Bicarbonate

CAS No : 144-55-8

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Sodium bicarbonate	(CAS No) 144-55-8	100	Not classified

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

Skin Contact: Brush off loose particles from skin. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention if a large amount is swallowed.

Most Important Symptoms and Effects Both Acute and Delayed

General: None expected under normal conditions of use.

Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Eye Contact: Contact may cause irritation due to mechanical abrasion.

Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: For surrounding fire: Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: NOT FLAMMABLE . Under fire conditions, hazardous fumes will be present.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Sodium oxides.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Keep in suitable, closed containers for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated, material emits irritating fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Materials: Acids. Water. Lime.

Storage Temperature: < 65 °C (150 °F)

Specific End Use(s) Food Ingredient, Pharmaceutical, Water Treatment, General Industrial Use

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Particulates not otherwise classified (PNOC)		
USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m^3 Respirable fraction 10 mg/m^3 Total Dust
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m^3 Respirable fraction 15 mg/m^3 Total Dust
Alberta	OEL TWA (mg/m³)	10 mg/m³ (total)
British Columbia	OEL TWA (mg/m³)	10 mg/m³ (total dust)
Manitoba	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
New Brunswick	OEL TWA (mg/m³)	3 mg/m³ (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Nova Scotia	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Nunavut	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Northwest Territories	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Ontario	OEL TWA (mg/m³)	10 mg/m³ (inhalable)
Prince Edward Island	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Québec	VEMP (mg/m³)	10 mg/m³ (including dust, inert or nuisance particulates; containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m³)	20 mg/m³ (insoluble or poorly soluble-inhalable fraction) 6 mg/m³ (insoluble or poorly soluble-respirable fraction)
Saskatchewan	OEL TWA (mg/m³)	10 mg/m³ (insoluble or poorly soluble-inhalable fraction) 3 mg/m³ (insoluble or poorly soluble-respirable fraction)

Exposure Controls

Appropriate Engineering Controls: For occupational/workplace settings: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: For occupational or bulk quantities: Gloves. Safety glasses. Dust formation: dust mask.

Materials for Protective Clothing: For occupational or bulk quantities: Chemically resistant materials and fabrics.

Hand Protection: For occupational or bulk quantities: Wear chemically resistant protective gloves.

Eye Protection: For occupational or bulk quantities: Chemical goggles or safety glasses.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Solid
Appearance	:	White, crystalline powder
Odor	:	None
Odor Threshold	:	Not available
pH	:	8.2 (1% Solution)
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	Not available

Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Upper/Lower Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Specific gravity / density	:	62 lb/ft^3
Specific Gravity	:	Not available
Solubility	:	Water: 8.6 g/100ml @ 20 °C (68 °F)
Partition Coefficient: N-octanol/water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Decomposes slowly on exposure to water (moisture).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Exposure to moisture or moist air. Temperatures above 150°F (65 °C).

Incompatible Materials: Acids. Water. Lime.

Hazardous Decomposition Products: None known. At high temperature may liberate toxic gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data:

Sodium Bicarbonate	
LD50 Oral Rat	7.3 g/kg
LC50 Inhalation Rat	> 4.7 mg/l/4h

Skin Corrosion/Irritation: Not classified [**pH:** 8.2 (1% Solution)]

Serious Eye Damage/Irritation: Not classified [**pH:** 8.2 (1% Solution)]

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Symptoms/Injuries After Eye Contact: Contact may cause irritation due to mechanical abrasion.

Symptoms/Injuries After Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity No additional information available

Sodium Bicarbonate	
LC50 Fish 1	7100 mg/l Bluegill
EC50 Daphnia 1	4100 mg/l
LC 50 Fish 2	7700 mg/l Rainbow Trout

Sodium bicarbonate (144-55-8)	
LC50 Fish 1	8250 - 9000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2350 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Persistence and Degradability Not established

Bioaccumulative Potential Not established

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG Not regulated for transport

In Accordance with IATA Not regulated for transport

In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal & International Regulations

Sodium Bicarbonate (144-55-8)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Neither this product nor its chemical components appear on any US state lists.

Canadian Regulations

Sodium bicarbonate (144-55-8)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 03/12/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328

This Product Safety Data Sheet is offered solely for your information, consideration and investigation. Church & Dwight Co., Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. Church & Dwight Co., Inc. urges persons receiving this information to make their own determination as to the information suitability for their particular application.

North America GHS US 2012 & WHMIS 2

Arm & Hammer™ Carpet Deodorizer - All Versions and Fragrances

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 04/21/2015 Date of issue: 04/21/2015 Supersedes Date: 11/11/2013 Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Arm & Hammer™ Carpet Deodorizer - All Versions and Fragrances

Intended Use of the Product

Deodorizer, Allergen Reducer.

Name, Address, and Telephone of the Responsible Party

Company

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328
www.churchdwight.com

Emergency Telephone Number

Emergency Number : For Medical Emergency: 1-888-234-1828, For Chemical Emergency: 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Classification of the Substance or Mixture

Classification (GHS-US)

Not classified

Label Elements

GHS-US Labeling No labeling applicable

Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Prolonged contact with dust can produce mechanical irritation. May aggravate an existing allergic or asthmatic condition.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Sodium bicarbonate	(CAS No) 144-55-8	60 - 100	Not classified
Calcium silicate	(CAS No) 1344-95-2	0.1 - 1	Not classified
Quaternary ammonium compounds, ethylbis (hydroxyethyl) tallow alkyl, ethoxylated, ethyl sulfates (salts)	(CAS No) 68071-95-4	0.1 - 1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].
A range of concentration as prescribed by the Controlled Products Regulations has been used where necessary, due to varying composition.
Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

Skin Contact: Brush off loose particles from skin. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention if a large amount is swallowed.

Most Important Symptoms and Effects Both Acute and Delayed

General: None expected under normal conditions of use.

Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Eye Contact: Contact may cause irritation due to mechanical abrasion.

Ingestion: Ingestion of small amounts is not likely to be harmful. If a large quantity has been ingested: May cause gastrointestinal irritation.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: For surrounding fire. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Yields Carbon oxides (CO, CO_2) at temperatures over 200 °F (93.3 °C), and Sodium oxides if exposed to temperatures above 1500 °F (815.6 °C).

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe dust or fumes. Avoid skin and eye contact.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Keep in suitable, closed containers for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated, material emits irritating fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Ensure all national/local regulations are observed.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store away from incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers. Water. Lime.

Specific End Use(s)

Deodorizer, Allergen Reducer.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government

Calcium silicate (1344-95-2)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ (synthetic nonfibrous-particulate matter containing no asbestos and <1% crystalline silica)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen synthetic nonfibrous
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)
Alberta	OEL TWA (mg/m³)	10 mg/m³ (synthetic, nonfibrous)
British Columbia	OEL TWA (mg/m³)	10 mg/m³ (total particulate matter containing no Asbestos and <1% Crystalline silica-total particulate) 3 mg/m³ (particulate matter containing no Asbestos and <1% Crystalline silica-respirable particulate)
Manitoba	OEL TWA (mg/m³)	10 mg/m³ (synthetic nonfibrous, particulate matter containing no Asbestos and <1% Crystalline silica)
New Brunswick	OEL TWA (mg/m³)	10 mg/m³ (particulate matter containing no Asbestos and <1% Crystalline silica)
Newfoundland & Labrador	OEL TWA (mg/m³)	10 mg/m³ (synthetic nonfibrous, particulate matter containing no asbestos and <1% crystalline silica)
Nova Scotia	OEL TWA (mg/m³)	10 mg/m³ (synthetic nonfibrous, particulate matter containing no Asbestos and <1% Crystalline silica)
Nunavut	OEL TWA (mg/m³)	5 mg/m³ (respirable mass) 10 mg/m³ (total mass)
Northwest Territories	OEL TWA (mg/m³)	5 mg/m³ (respirable mass) 10 mg/m³ (total mass)
Ontario	OEL TWA (mg/m³)	10 mg/m³ (synthetic nonfibrous, containing no Asbestos and <1% Crystalline silica)
Prince Edward Island	OEL TWA (mg/m³)	10 mg/m³ (synthetic nonfibrous; particulate matter containing no Asbestos and <1% Crystalline silica)
Québec	VEMP (mg/m³)	10 mg/m³ (synthetic, containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m³)	20 mg/m³ (nonfibrous)
Saskatchewan	OEL TWA (mg/m³)	10 mg/m³ (nonfibrous)
Yukon	OEL TWA (mg/m³)	30 mppcf

		10 mg/m³

Exposure Controls

Appropriate Engineering Controls: For occupational/workplace settings: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: For occupational/workplace settings and bulk quantities: Gloves. Safety glasses. Dust formation: dust mask.

Materials for Protective Clothing: For occupational/workplace settings: Chemically resistant materials and fabrics.

Hand Protection: For occupational/workplace settings: Chemically resistant gloves are recommended, but not required.

Eye Protection: For occupational/workplace settings: Chemical goggles or safety glasses.

Skin and Body Protection: For occupational/workplace settings: In case of dust production: dustproof clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Solid
Appearance	:	White, granular powder
Odor	:	As per label
Odor Threshold	:	Not available
pH	:	8.2 (1% SOLN. w/v)
Evaporation Rate	:	Not available
Melting Point	:	Not applicable
Freezing Point	:	Not available
Boiling Point	:	Not applicable
Flash Point	:	Not applicable
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Specific gravity / density	:	1.0 g/cc
Specific Gravity	:	1.0
Solubility	:	8.5 g/ml @ 20 °C (68 °F) in water
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Exposure to moisture or moist air. Temperatures above 200 °F (93.3 °C).

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers. Water. Lime.

Hazardous Decomposition Products: Yields Carbon oxides (CO, CO_2) at temperatures over 200 °F (93.3 °C), and Sodium oxides if exposed to temperatures above 1500 °F (815.6 °C).

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data:

Arm & Hammer™ Carpet Deodorizer - All Versions and Fragrances	
LD50 Oral Rat	7.3 g/kg
LC50 Inhalation Rat	> 4.7 mg/l/4h

Skin Corrosion/Irritation: Not classified

pH: 8.2

Serious Eye Damage/Irritation: Not classified

pH: 8.2

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged inhalation of dust may cause respiratory irritation

Symptoms/Injuries After Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation

Symptoms/Injuries After Eye Contact: Contact may cause irritation due to mechanical abrasion

Symptoms/Injuries After Ingestion: Ingestion of small amounts is not likely to be harmful. If a large quantity has been ingested: May cause gastrointestinal irritation

Chronic Symptoms: None expected under normal conditions of use

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Sodium bicarbonate (144-55-8)	
LD50 Oral Rat	4220 mg/kg

Calcium silicate (1344-95-2)	
LD50 Oral Rat	3400 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity **Not classified**

Arm & Hammer™ Carpet Deodorizer - All Versions and Fragrances	
LC50 Fish 1	7100 mg/l Bluegill
EC50 Daphnia 1	4100 mg/l
LC 50 Fish 2	7700 mg/l Rainbow Trout

Sodium bicarbonate (144-55-8)	
LC50 Fish 1	8250 - 9000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2350 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Persistence and Degradability

Arm & Hammer™ Carpet Deodorizer - All Versions and Fragrances	
Persistence and Degradability	Not established.

Bioaccumulative Potential

Arm & Hammer™ Carpet Deodorizer - All Versions and Fragrances	
Bioaccumulative Potential	Not established.

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG Not regulated for transport

In Accordance with IATA Not regulated for transport

In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal and international regulations

Sodium Bicarbonate (144-55-8)

Regional Legislation

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium Silicate (1344-95-2)

Regional Legislation

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Quaternary Ammonium Compounds, Ethylbis(Hydroxyethyl)Tallow Alkyl, Ethoxylated, Ethyl Sulfates (Salts) (68071-95-4)

Regional Legislation

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Calcium silicate (1344-95-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

Arm & Hammer™ Carpet Deodorizer - All Versions and Fragrances	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Sodium bicarbonate (144-55-8)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Calcium silicate (1344-95-2)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Quaternary ammonium compounds, ethylbis(hydroxyethyl)tallow alkyl, ethoxylated, ethyl sulfates (salts) (68071-95-4)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 04/21/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

GHS Full Text Phrases:

Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
H315	Causes skin irritation
H319	Causes serious eye irritation

Party Responsible for the Preparation of This Document

Church & Dwight
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This Product Safety Data Sheet is offered solely for your information, consideration and investigation. Church & Dwight Co., Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. Church & Dwight Co., Inc. urges persons receiving this information to make their own determination as to the information suitability for their particular application.

North America GHS US 2012 & WHMIS 2

MATERIAL SAFETY DATA SHEET

CHAMP GLASS CLEANER

1. Product And Company Identification

Supplier	Manufacturer
Chase Products Co. **19th and Gardner Road** **Broadview, IL 60155 USA** **Company Contact:** Aludia B. Hernandez **Telephone Number:** 708-865-1000 **FAX Number:** 708-865-0923 **E-Mail:** sales@chaseproducts.com **Web Site:** www.chaseproducts.com	**Chase Products Co.** **19th and Gardner Road** **Broadview, IL 60155 USA** **Company Contact:** Aludia B. Hernandez **Telephone Number:** 708-865-1000 **FAX Number:** 708-865-0923 **E-Mail:** sales@chaseproducts.com **Web Site:** www.chaseproducts.com
Supplier Emergency Contacts & Phone Number **Chem-Tel: 1-800-255-3924**	**Manufacturer Emergency Contacts & Phone Number** **Chem-Tel: 1-800-255-3924**

Issue Date: 12/17/2003

Product Name: CHAMP GLASS CLEANER
Chemical Name: 7-4452
CAS Number: Not Established
MSDS Number: 2224
Product Code: 438-5151-3
Product/Material Uses - Glass Cleaner

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
2-BUTOXYETHANOL	111-76-2		1 - 5
AMMONIUM HYDROXIDE	1336-21-6		
ISOBUTANE	75-28-5		
PROPANE	74-98-6		

Hazardous components, according to OSHA, are listed when present at 1.0% or greater. Carcinoges are listed when present at 0.1% or greater.

3. Hazards Identification

Primary Routes(s) Of Entry - Eye contact, skin contact, inhalation, ingestion (possible, but consider unlikely).
Eye Hazards - Can cause irritation after contact with the eyes.
Skin Hazards - May cause skin irritation after prolonged contact with skin. 2-Butoxyethanol penetrates skin readily. Frequent or wide spread contact may result on skin absorption of potentially harmful amounts.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur. 2-Butoxyethanol may cause red blood cell hemolysis and possible liver and kidney damage.
Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist may cause headaches, dizziness and nausea.
Chronic/Carcinogenicity Effects - 2-Butoxyethanol may cause hemolysis of the blood cells leading to possible liver and kidney damage. None of the ingredients on this product are listed as carcinogenic by NTP, IARC or OSHA
Epidemiology - None known
Teratogenicity (Birth Defects) - None known
Reproductive Effects - None known
Neurotoxicity - None known
Mutagenicity (Genetic Effect) - None known

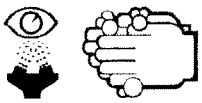
MATERIAL SAFETY DATA SHEET

CHAMP GLASS CLEANER

3. Hazards Identification - Continued

Signs And Symptoms - Acute: Deliberate inhalation of concentrate vapor or mist may cause headaches, dizziness and nausea. Prolonged and repeated contact with skin may cause irritation. Contact with the eyes causes irritation.
Conditions Aggravated By Exposure - May aggravate pre-existing skin disorders.
Conditions Aggravated By Overexposure - May aggravate pre-existing skin disorders.

First Aid (Pictograms)



4. First Aid Measures

Eye - Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin - Wash skin with soap and water. If irritation develops, consult a physician.
Ingestion - Ingestion from an aerosol product is unlikely to occur. In case of accidental ingestion call a poison control center for treatment advise.
Inhalation - If overcome by vapor move victim to fresh air. If person is not breathing, call 911 or an ambulance, then provide artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.

5. Fire Fighting Measures

Flash Point: Not available °F Not available °C
Flash Point Method: Not available
Lower Explosive Limit: Not available
Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which **Flame Projection is 0 in.** Temperatures above 120 F may cause cans to burst.
Extinguishing Media - Use CO2 (Carbon Dioxide), dry chemical, or water fog.
Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

7. Handling And Storage

Handling And Storage Precautions - Store in a cool, dry place away from heat and open flame.
Handling Precautions - Do not deliberately inhale vapor or spray mist. Avoid getting spray into eyes. Keep out of reach of children.
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity). **AEROSOL STORAGE LEVEL I (NFPA-30B)**
Work/Hygienic Practices - Wash thoroughly after handling.

Protective Clothing (Pictograms)

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Household type gloves, if desired.
Respiratory Protection - None required if used in a well-ventilated area.

Ingredient(s) - Exposure Limits
2-BUTOXYETHANOL
ACGIH TLV-TWA 20 ppm (Skin) ; OSHA PEL-TWA 50 ppm (Skin)
AMMONIUM HYDROXIDE
ACGIH TLV-STEL 35 ppm ; ACGIH TLV-TWA 25 ppm ; OSHA PEL-TWA 50 ppm
PROPANE
ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm

9. Physical And Chemical Properties

Appearance - Clear, water-like liquid.
Odor - Mild perfumed odor.

Chemical Type: Mixture
Physical State: Liquid
Melting Point: Not applicable °F Not applicable °C
Boiling Point: water 212 °F water 100 °C
Specific Gravity: 1.0 - 1.1 concentrate
Percent VOCs: 7.98
pH Factor: 10.2 - 11.2
Solubility: Soluble in water
Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F
Incompatible Materials - Avoid heat and open flame.
Hazardous Decomposition Products - None known in a significant amount.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Do not puncture or incinerate container. **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

14. Transport Information - Continued

Hazard Class
2.1

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes
Acute Health Hazard

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

SARA Section 313 Notification - This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material: 2-Butoxyethanol. See section 2 for % amount in this product.

Ingredient(s) - U.S. Regulatory Information
2-BUTOXYETHANOL
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard; SARA - Chronic Health Hazard; SARA - Fire Hazard

Ingredient(s) - State Regulations
2-BUTOXYETHANOL
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

AMMONIUM HYDROXIDE
New Jersey - Workplace Hazard; New Jersey - Special Hazard; New Jersey - TCPA Extraordinarily Hazardous Substance; Pennsylvania - Workplace Hazard; Pennsylvania - Environmental Hazard; New York City - Hazardous Substance

ISOBUTANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

PROPANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

MATERIAL SAFETY DATA SHEET

CHAMP GLASS CLEANER

NFPA

HMIS

HEALTH	1
FLAMMABILITY	1
REACTIVITY	1
PERSONAL PROTECTION	B

16. Other Information

Revision/Preparer Information

MSDS Preparer: Laura E. Radevski

MSDS Preparer Phone Number: 708-865-1000

This MSDS Supercedes A Previous MSDS Dated: 05/19/2001

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Chase Products Co.

Printed Using MSDS Generator™ 2000

Safety Data Sheet

Zep, Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-I-BUY-ZEP (428-9937)
www.zep.com

526

WITHLACOOCHEE RIVER ELEC CO-OP
14639 21ST ST
DADE CITY FL 33523-2920

Section 1. Chemical Product and Company Identification

Product name CHERRY BOMB
Product use Abrasive Hand Cleaner.
Product code 0951
Date of issue 04/17/13 **Supersedes** 06/05/09

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 1-877-I-BUY-ZEP (428-9937)

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By
Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

CAUTION

MAY CAUSE SKIN IRRITATION.

*Hazard Determination System (HDS): Health, Flammability, Reactivity

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Dermal contact. Eye contact.

Eyes May cause eye irritation. Inflammation of the eye is characterized by redness, watering and itching.

Skin This product is formulated for use on the skin, but should always be immediately rinsed off with plenty of water. No known acute effects of this product resulting from skin contact.

Inhalation No known acute effects of this product resulting from inhalation.

Ingestion May be harmful if swallowed. Can cause gastrointestinal disturbances.

Chronic effects Prolonged or repeated contact may dry skin and cause irritation.

Carcinogenicity
No known significant effects or critical hazards.

Product/ingredient name
Not available.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
Distillates (petroleum), hydrotreated light	64742-47-8	20 - 30
Nonylphenol, ethoxylated	9016-45-9	5 - 15
Fatty acids, tall-oil	61790-12-3	5 - 15
White mineral oil (petroleum)	8042-47-5	1 - 10
Polyethylene glycol	25322-68-3	1 - 5

Section 4. First Aid Measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Skin Contact Rinse with plenty of running water. Get medical attention if irritation develops.

Inhalation Move exposed person to fresh air. Get medical attention if symptoms appear.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If affected person is conscious, give plenty of water to drink. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)

Flash Point Closed cup: >93.3°C (>199.9°F) [Tagliabue.]

Flammable Limits Not available.

Flammability Structure inhibits combustibility of solvent.

Fire hazard In a fire or if heated, a pressure increase will occur and the container may burst.

Fire-Fighting Procedures Use an extinguishing agent suitable for the surrounding fire.

Section 6. Accidental Release Measures

Spill Clean up Clear up spills immediately and dispose of waste safely.

Section 7. Handling and Storage

Handling For external use only. Avoid contact with eyes. Do not ingest.

Storage Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Do not store in unlabeled containers. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C). Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
White mineral oil (petroleum)	**ACGIH TLV (United States, 2/2010).** TWA: 5 mg/m³ 8 hour(s). Form: Inhalable fraction **NIOSH REL (United States, 6/2009).** TWA: 5 mg/m³ 10 hour(s). Form: Mist STEL: 10 mg/m³ 15 minute(s). Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hour(s).
Polyethylene glycol	**AIHA WEEL (United States, 5/2010).** TWA: 10 mg/m³ 8 hour(s). Form: Aerosol

Personal Protective Equipment (PPE)

Eyes No special protection is required.

Body No special protective clothing is required.

Respiratory No special ventilation requirements.

Section 9. Physical and Chemical Properties

Physical State Liquid. [Viscous liquid.]

pH 7.0 - 8.0

Boiling Point Not available.

Specific Gravity 0.96

Solubility Very slightly soluble in the following materials: cold water and hot water.

Color Red.

Odor Cherry

Vapor Pressure Not available.

Vapor Density Not available.

Evaporation Rate Not available.

VOC (Consumer) 0.92 % (w/w) 0.074 lbs/gal (8.9 g/l)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Reactive or incompatible with the following materials: oxidizing materials.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Hazardous Decomposition Products carbon oxides (CO, CO_2) May emit toxic fumes under fire conditions.

Section 11. Toxicological Information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Nonylphenol, ethoxylated	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Fatty acids, tall-oil	LD50 Oral	Rat	>10000 mg/kg	-
White mineral oil (petroleum)	LD50 Oral	Rat	>5000 mg/kg	-

Section 12. Ecological Information

Environmental Effects Not available.

Aquatic Ecotoxicity

Distillates (petroleum), hydrotreated light	-	Acute LC50 2200 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 35 to 75 mm	4 days
Nonylphenol, ethoxylated	-	Acute EC50 12 mg/L Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata	96 hours
	-	Acute LC50 1 to 2 ug/L Fresh water	Crustaceans - Fairy shrimp - Thamnocephalus platyurus - Nauplii - 24 hours	48 hours
	-	Acute LC50 4800 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - Larvae - <=24 hours	48 hours
	-	Acute LC50 1300 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 1 g	96 hours
	-	Chronic NOEC 35 ug/L Fresh water	Fish - Medaka, high-eyes - Oryzias latipes - Fry - 1 days post-hatch	100 days
Polyethylene glycol	-	Acute LC50 >1000000 ug/L Fresh water	Fish - Atlantic salmon - Salmo salar - Parr - 8.2 to 11.7 cm - 5.1 to 14.1 g	96 hours

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Classification: Non-hazardous waste
Origin: RCRA waste.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	Not regulated.	-	-	-	
IMDG Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol, ethoxylated). Marine pollutant (Nonylphenol, ethoxylated)	9	III	

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.
PG* : Packing group

Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:
No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations

California Prop 65

No products were found.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.*

klm

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron RPM® Heavy Duty Motor Oil

Product Use: Engine Oil
Product Number(s): CPS225044, CPS225048
Synonyms: Chevron RPM® Heavy Duty Motor Oil SAE 10W-30, Chevron RPM® Heavy Duty Motor Oil SAE 15W-40
Company Identification
Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	60 - 100 %weight
Zinc dialkyldithiophosphate	68649-42-3	3 - 7 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation

may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: (ASTM D92) 204 °C (399 °F) Minimum
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.
Respiratory Protection: No respiratory protection is normally required.
If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown
Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)
Vapor Density (Air = 1): >1
Boiling Point: >315°C (599°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.87 - 0.89 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)
Density: 0.87 kg/l @ 15°C (59°F)
Viscosity: 10.7 - 19.3 mm2/s @ 100°C (212°F)
Evaporation Rate: No data available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS
Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.
Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed

human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3). During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

ENVIRONMENTAL FATE
Ready Biodegradability: This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR
Additional Information:NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO TI OR IATA DGR

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	NO
2.	Delayed (Chronic) Health Effects:	NO
3.	Fire Hazard:	NO
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1 03=EPCRA 313

01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.
Zinc dialkyldithiophosphate 03, 06

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: DSL (Canada), KECI (Korea), PICCS (Philippines), TSCA (United States).
One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required. All other components are listed or exempted from listing on EINECS.

One or more components does not comply with the following chemical inventory requirements: AICS (Australia), ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Motor oil)

WHMIS CLASSIFICATION:
This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:
Label Category : ENGINE OIL 1 - ENG1

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 3,9,16
Revision Date: MARCH 16, 2011

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)

IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMMERCIAL SOLUTIONS® TILEX® SOAP SCUM REMOVER & DISINFECTANT

Description: CLEAR, FRAGRANCED LIQUID

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. No. 5813-40-67619	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300

II Health Hazard Data

Eye irritant. Prolonged inhalation of vapors or mist may cause respiratory irritation. There are no known medical conditions aggravated by exposure to this product.

FIRST AID: EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. If irritation persists, call a physician. INHALATION: If breathing is affected, remove to fresh air. SKIN CONTACT: Remove contaminated clothing. Flush skin with water. If irritation persists, call a physician. IF SWALLOWED: Drink a glassful of water and immediately call a physician.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
n-Alkyl dimethyl aryl ammonium chloride CAS# 68391-01-5 and 68956-79-6	0.3%	Not established
Tetrapotassium ethylenediamine tetraacetate (EDTA) CAS #5964-35-2	1-5%	Not established
Diethylene Glycol Monobutyl ether CAS #112-34-5	3-7%	Not established

IV Special Protection and Precautions

Do not get in eyes, on skin, or on clothing.

Avoid contact with food.

Personal protection: Chemical safety goggles and protective gloves are recommended if potential for prolonged or repeated exposure.

V Transportation and Regulatory Data

DOT/IATA/IMO: Not restricted.

TSCA Status: All components of this product are on the TSCA inventory.

EPA - SARA Title III/CERLA: This product is regulated under Sections 311/312. This product contains no chemicals which are regulated under Section 313 and contains glycol ethers (<7%) and potassium hydroxide (CAS# 1310-58-3, <0.5%), which are regulated under Section 304/CERCLA.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.

VII Reactivity Data

Stability: Stable
Polymerization: Will not occur
Conditions to Avoid: Storage at high temperature (>200°F)
Incompatible Materials: No specific incompatibility
Decomposition Products: Thermal decomposition may produce carbon dioxide (CO_2) and/or carbon monoxide (CO).

VIII Fire and Explosion Data

Flash Point: > 200°F (closed cup)
Fire Extinguishing Agents: Water spray, carbon dioxide (CO_2), or dry chemical.
Special Fire-Fighting Procedures: Use water spray to keep containers cool.
Unusual Fire and Explosion Hazards: None

IX Physical Data

pH ..... ~12.0
Specific ..... ~1.0
Solubility in water ..... Soluble

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DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH DATE PREPARED 4/02

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** New **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox Commercial Solutions® Clorox® Toilet Bowl Cleaner with Bleach$_1$**

Other means of identification

EPA Registration Number 67619-16

Recommended use of the chemical and restrictions on use

Recommended use Disinfecting toilet bowl cleaner with bleach

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612

Phone: 1-510-271-7000

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies, call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Danger**

Hazard Statements
Causes severe skin burns and eye damage
Causes serious eye damage

Appearance Clear, green **Physical State** Viscous liquid **Odor** Crisp, green, floral, bleach

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves, protective clothing, face protection, and eye protection such as safety glasses.

Precautionary Statements - Response
Immediately call a poison center or doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Specific treatment (see supplemental first aid instructions on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents in accordance with all applicable federal, state, and local regulations.

Hazards not otherwise classified (HNOC)
Although not expected, heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease may be aggravated by exposure to high concentrations of vapor or mist.

Unknown Toxicity
0.11% of the mixture consists of ingredient(s) of unknown toxicity.

Other information
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Interactions with Other Chemicals
Reacts with other household chemicals such as other toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Sodium hypochlorite	7681-52-9	1 - 5	*
Sodium cocoate	91032-12-1	0.5 - 1.5	*
Sodium hydroxide	1310-73-2	0.1 - 1	*
Myristamine oxide	3332-27-2	0.1 - 1	*
Lauramine oxide	1643-20-5	0.1 - 1	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice Call a poison control center or doctor immediately for treatment advice. Show this safety data sheet to the doctor in attendance.

Eye Contact Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation Move to fresh air. If breathing is affected, call a doctor.

Ingestion Call a poison control center or doctor immediately for treatment advice. Have person sip a glassful of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Protection of First-aiders Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning of eyes and skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Use of gastric lavage or emesis is contraindicated.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
This product causes burns to eyes, skin, and mucous membranes. Thermal decomposition can release sodium chlorate and irritating gases and vapors.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation. Use personal protective equipment as required. For spills of multiple products, responders should evaluate the MSDSs of the products for incompatibility with sodium hypochlorite. Breathing protection should be worn in enclosed and/or poorly-ventilated areas until hazard assessment is complete.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions See Section 12 for ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Do not contaminate water, food, or feed by storage of this product. Store in a location inaccessible to children. Tightly close cap between uses.

Incompatible Products Other toilet bowl cleaners, rust removers, acids, or products containing ammonia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3	IDLH: 10 mg/m^3 Ceiling: 2 mg/m^3
Sodium hypochlorite 7681-52-9	None	None	None
Sodium cocoate 91032-12-1	None	None	None
Myristamine oxide 3332-27-2	None	None	None
Lauramine oxide 1643-20-5	None	None	None

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection If splashes are likely to occur: Wear safety glasses with side shields (or goggles) or face shield.

Skin and Body Protection Wear rubber or neoprene gloves and protective clothing such as long-sleeved shirt.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods. Remove and wash contaminated clothing before re-use. Do not eat, drink, or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Viscous liquid		
Appearance	Clear	**Odor**	Crisp, green, floral, bleach
Color	Green	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	12.5 - 13.5	None known
Melting/freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	Not flammable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.05	None known
Water Solubility	Soluble in water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	~1000 cP	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity
Reacts with other household chemicals such as other toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known based on information supplied.

Incompatible materials
Other toilet bowl cleaners, rust removers, acids, or products containing ammonia.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information .

Inhalation Exposure to vapor or mist may irritate respiratory tract and cause coughing. Inhalation of high concentrations may cause pulmonary edema.

Eye Contact Corrosive. May cause severe damage to eyes.

Skin Contact May cause severe irritation to skin. Prolonged contact may cause burns to skin.

Ingestion Ingestion may cause burns to gastrointestinal tract and respiratory tract, nausea, vomiting, and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hypochlorite 7681-52-9	8200 mg/kg (Rat)	>10000 mg/kg (Rabbit)	-
Sodium hydroxide 1310-73-2	-	1350 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes. May cause burns to eyes. May cause redness or burns to skin. Inhalation may cause coughing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic Toxicity Carcinogenic potential is unknown.
Target Organ Effects Respiratory system, eyes, skin, gastrointestinal tract (GI).

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all applicable federal, state, and local regulations.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations. Do not contaminate water, food, or feed by disposal of this product.

14. TRANSPORT INFORMATION

DOT LIMITED QUANTITY.

TDG

UN-No	UN1760
Proper Shipping Name	CORROSIVE LIQUID, N.O.S.
Hazard Class	8
Packing Group	II
Description	UN1760, CORROSIVE LIQUID, N.O.S. (SODIUM HYPOCHLORITE, SODIUM HYDROXIDE), 8, II, MARINE POLLUTANT

ICAO

UN-No	UN1760
Proper Shipping Name	CORROSIVE LIQUID, N.O.S.
Hazard Class	8
Packing Group	II
Description	UN1760, CORROSIVE LIQUID, N.O.S. (SODIUM HYPOCHLORITE, SODIUM HYDROXIDE), 8, II, MARINE POLLUTANT

IATA

UN-No	UN1760
Proper Shipping Name	CORROSIVE LIQUID, N.O.S.
Hazard Class	8
Packing Group	II
Description	UN1760, CORROSIVE LIQUID, N.O.S. (SODIUM HYPOCHLORITE, SODIUM HYDROXIDE), 8, II, MARINE POLLUTANT

IMDG/IMO

UN-No	UN1760
Proper Shipping Name	CORROSIVE LIQUID, N.O.S.
Hazard Class	UN1760
Packing Group	CORROSIVE LIQUID, N.O.S.
EmS No.	F-A, S-B
Marine Pollutant	Product is a marine pollutant according to the criteria set by IMDG/IMO
Description	UN1760, CORROSIVE LIQUID, N.O.S. (SODIUM HYPOCHLORITE, SODIUM HYDROXIDE), 8, II, MARINE POLLUTANT

15. REGULATORY INFORMATION

Chemical Inventories

TSCA	All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.
DSL/NDSL	All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb			X
Sodium hydroxide 1310-73-2	1000 lb			X

CERCLA
This material, as supplied, contains the following substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium hypochlorite 7681-52-9	100 lb	–	RQ 100 lb final RQ RQ 45.4 kg final RQ
Sodium hydroxide 1310-73-2	1000 lb	–	RQ 1000 lb final RQ RQ 454 kg final RQ

EPA Statement
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

> **DANGER: CORROSIVE.** Causes irreversible eye damage. Causes skin irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get in eyes, on skin, or on clothing. For prolonged use, wear gloves. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse. Use only in well-ventilated areas.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Sodium hypochlorite 7681-52-9	X	X	X	X	
Sodium hydroxide 1310-73-2	X	X	X	X	

International Regulations

Canada
WHMIS Hazard Class
E - Corrosive material

16. OTHER INFORMATION

NFPA	**Health Hazard**	3	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazard**	3	**Flammability** 0	**Physical Hazard** 0	**Personal Protection**	B

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date New

Revision Note New

Reference 1108907/50916001.002

General Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** March 20, 2018 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox® Disinfecting Wipes - Lemon Fresh**

Other means of identification

Drug Identification Number 02246233

Recommended use of the chemical and restrictions on use

Recommended use Moistened disinfecting wipes

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
The Clorox Company of Canada Ltd.
150 Biscayne Crescent
Brampton, Ontario L6W 4V3

Phone: 1-905-595-8200

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This product is not considered hazardous under GHS.

GHS Label elements, including precautionary statements

Emergency Overview

This product is not considered hazardous under GHS.

Appearance Clear, colourless liquid absorbed into white, non-woven wipes | **Physical State** Thin liquid absorbed into non-woven wipes | **Odour** Citrus, lemon, lime

Precautionary Statements - Prevention
None

Precautionary Statements - Response
None

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
21.5% of the mixture consists of ingredient(s) of unknown toxicity

Other information
No information available

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %	Trade Secret
Ethylene glycol monohexyl ether	112-25-4	1 - 5	*
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	85409-23-0	0.1 - 0.2	*
n-Alkyl (5% C12, 60% C14, 30% C16, 5% C18) dimethyl benzyl ammonium chloride	53516-76-0	0.1 - 0.2	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. If present, remove contact lenses after the first 5 minutes of rinsing, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Skin Contact Rinse skin with plenty of water. If irritation persists, call a doctor.

Inhalation Move to fresh air. If breathing problems develop, call a doctor.

Ingestion Drink a glassful of water. Call a doctor or poison control center.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Liquid may cause eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

Hazardous Combustion Products
Oxides of carbon.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool, and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene glycol monohexyl ether 112-25-4	None	None	None
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride 85409-23-0	None	None	None
n-Alkyl (5% C12, 60% C14, 30% C16, 5% C18) dimethyl benzyl ammonium chloride 53516-76-0	None	None	None

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection	No special protective equipment required.
Skin and Body Protection	No special protective equipment required.
Respiratory Protection	No protective equipment is needed under normal use conditions. If irritation is experienced, ventilation and evacuation may be required.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Thin liquid absorbed into non-woven wipes		
Appearance	Clear liquid absorbed into non-woven wipes	**Odour**	Citrus, lemon, lime
Colour	Colourless liquid - white non-woven wipes	**Odour Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	6 - 9 (liquid)	None known
Melting/freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.0 (liquid)	None known
Water Solubility	Complete (liquid)	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known based on information supplied.

Incompatible materials
None known.

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information .

Inhalation Exposure to vapor or mist may irritate respiratory tract.

Eye Contact Liquid may cause irritation.

Skin Contact Liquid may cause slight irritation.

Ingestion Ingestion of liquid may cause slight irritation to mucous membranes and gastrointestinal tract.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethylene glycol monohexyl ether 112-25-4	739 mg/kg (Rat)	721 mg/kg (Rabbit)	>0.5 mg/L (Rat, 4 h)

Information on toxicological effects

Symptoms Liquid may cause redness and tearing of eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity None of the ingredients in this product are on the IARC, OSHA, or NTP carcinogen lists.

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic Toxicity No known effect based on information supplied.
Target Organ Effects Respiratory system, eyes, skin, gastrointestinal tract (GI).

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

ATEmix (oral)
40.1 g/kg

ATEmix (dermal)
59.8 g/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity
No information available.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all existing federal, provincial, and municipal environmental regulations.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all existing federal, provincial, and municipal environmental regulations.

14. TRANSPORT INFORMATION

DOT Not regulated.

TDG Not regulated.

ICAO Not regulated.

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Chemical Inventories

TSCA	All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.
DSL/NDSL	All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Canada Regulations

WHMIS Hazard Class
D2B Toxic materials

16. OTHER INFORMATION

NFPA	**Health Hazard** 1	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 1	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** A

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Preparation/Revision Date	March 20, 2018
Revision Note	Updated date
Reference	1073956-D/174196.001

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End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** August 1, 2018 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox® Automatic Toilet Bowl Cleaner**

Other means of identification

Synonyms None.

Recommended use of the chemical and restrictions on use

Recommended Use Toilet bowl cleaner

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
The Clorox Company
1221 Broadway
Oakland, CA 94612

Phone: 1-510-271-7000

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies, call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 1B
Oxidizing solids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Danger**

Hazard statements
Harmful if swallowed
Causes severe skin burns and eye damage
May cause an allergic skin reaction
May damage fertility or the unborn child
May intensify fire; oxidizer

Appearance White **Physical State** Solid **Odor** Slight chlorine

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Contaminated work clothing should not be allowed out of the workplace
Keep away from heat/sparks/open flames/hot surfaces - No smoking
Keep/Store away from clothing/ other combustible materials
Take any precaution to avoid mixing with combustibles
Keep only in original container

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see supplemental first aid instructions on this label)

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician

Skin
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Immediately call a POISON CENTER or doctor/physician

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth. Do NOT induce vomiting

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction

Spill
Absorb spillage to prevent material damage

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not Applicable

Unknown Toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

Other information
Toxic to aquatic life
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Interactions with Other Chemicals
Reacts with other household chemicals such as acid toilet bowl cleaners, rust removers, acids, vinegar, and ammonia-containing products to produce hazardous gases, such as chlorine/bromine and other chlorinated/brominated compounds. Avoid contact with strong alkalis.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-	16079-88-2	40 - 60	*
1,3-Dichloro-5,5-dimethyl hydantoin	118-52-5	20 - 30	*
Boric acid	10043-35-3	10 - 20	*
2,4-Imidazolidinedione, 1,3-dichloro-5-ethyl-5-methyl-	89415-87-2	7 - 15	*

* The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Seek immediate medical attention/advice. Remove contact lenses, if applicable, and continue flushing.

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes. IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes If skin irritation persists, call a physician. For severe burns, immediate medical attention is required.

Inhalation Move to fresh air. If not breathing, give artificial respiration. Administer oxygen if breathing is difficult and you are trained.

Ingestion Do NOT induce vomiting. Rinse mouth. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Protection of First-aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects Burning sensation. Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use water. Do not use dry chemicals or foams. CO_2 or Halon may provide limited control. Flood fire area with water from a distance. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May ignite combustibles (wood paper, oil, clothing, etc.). Runoff may create fire or explosion hazard.

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No

Sensitivity to Static Discharge Yes

Protective Equipment and Precautions for Firefighters
Do not move cargo or vehicle if cargo has been exposed to heat. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor; if this is impossible, withdraw from area and let fire burn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Attention! Corrosive material. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid dust formation. Do not breathe dust ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Refer to Section 8 Stop leak if you can do it without risk.

Other Information DO NOT GET WATER INSIDE CONTAINERS.

Environmental precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

Methods for Cleaning Up With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Dike far ahead of liquid spill for later disposal. Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Avoid dust formation. Fine dust dispersed in air may ignite. Wear personal protective equipment. Keep away from heat, sparks and open flame. No smoking. Do not breathe dust

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. Keep away from heat and sources of ignition. Keep in properly labeled containers. Do not store near combustible materials. Store in accordance with the particular national regulations. Store in accordance with local regulations.

Incompatible Products Acids. Bases. Organic material. Combustible materials. Hydrocarbons.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,3-Dichloro-5,5-dimethyl hydantoin 118-52-5	STEL: 0.4 mg/m^3 TWA: 0.2 mg/m^3	TWA: 0.2 mg/m^3	IDLH: 5 mg/m^3 TWA: 0.2 mg/m^3 STEL: 0.4 mg/m^3
Boric acid (H3BO3) 10043-35-3	TWA: 2 mg/m^3 inhalable fraction STEL: 6 mg/m^3 inhalable fraction	-	-

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Face-shield.

Skin and Body Protection Wear protective gloves/clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves. Wear fire/flame resistant/retardant clothing.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. Do not breathe dust

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Solid		
Appearance	White	**Odor**	Slight chlorine
Color	No information available	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	No data available	None known
Melting/freezing point	No data available	None known
Boiling Point/Range	No data available	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Slight	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available

10. STABILITY AND REACTIVITY

Reactivity
Oxidizer.

Chemical stability
Stable under recommended storage conditions. Strong oxidizer. Contact with other material may cause fire.

Possibility of Hazardous Reactions
Reacts with other household chemicals such as acid toilet bowl cleaners, rust removers, acids, vinegar, and ammonia-containing products to produce hazardous gases, such as chlorine/bromine and other chlorinated/brominated compounds.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Exposure to air or moisture over prolonged periods. Excessive heat. Heat, flames and sparks. Incompatible products. Heating in air. Dust formation.

Incompatible materials
Acids. Bases. Organic material. Combustible materials. Hydrocarbons.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation There is no data available for this product. Corrosive by inhalation (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract. Harmful by inhalation.

Eye Contact There is no data available for this product. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin Contact There is no data available for this product. Corrosive. (based on components) Causes burns.

Ingestion There is no data available for this product. Causes burns (based on components). Ingestion causes burns of the upper digestive and respiratory tract. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Boric acid 10043-35-3	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 0.16 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms Redness of the skin. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes. Hives.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization of susceptible persons. May cause sensitization by skin contact. May cause sensitization by inhalation.

Mutagenic Effects No information available.

Carcinogenicity No information available.

Reproductive Toxicity Contains a known or suspected reproductive toxin.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity No known effect based on information supplied. Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Effects from this product caused by acute exposure may cause permanent damage to target organs and/or may cause chronic conditions. Contains a known or suspected reproductive toxin. Possible risks of irreversible effects.
Target Organ Effects Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Reproductive system. Digestive System. Kidney.
Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral)
760.00 mg/kg
ATEmix (inhalation-gas)
7,000.00
ppm (4 hr)
ATEmix (inhalation-dust/mist)
5.01 mg/L
ATEmix (inhalation-vapor)
30.00ATEmix

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic organisms

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Dispose of in accordance with all applicable federal, state, and local regulations. Do not contaminate food or feed by disposal of this

Contaminated Packaging

Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT Limited Quantity.

TDG

UN-No	UN1479
Proper Shipping Name	OXIDIZING SOLID, N.O.S.
Hazard Class	5.1
Packing Group	II
Description	UN1479, OXIDIZING SOLID, N.O.S. (1-BROMO-3-CHLORO-5,5-DIMETHYL-2,4-IMIDAZOLIDINEDIONE), 5.1, II

ICAO

UN-No	UN1479
Proper Shipping Name	OXIDIZING SOLID, N.O.S.
Hazard Class	5.1
Packing Group	II
Description	UN1479, OXIDIZING SOLID, N.O.S. (1-BROMO-3-CHLORO-5,5-DIMETHYL-2,4-IMIDAZOLIDINEDIONE), 5.1, II

IATA

UN-No	UN1479
Proper Shipping Name	OXIDIZING SOLID, N.O.S.
Hazard Class	5.1
Packing Group	II
Description	UN1479, OXIDIZING SOLID, N.O.S. (1-BROMO-3-CHLORO-5,5-DIMETHYL-2,4-IMIDAZOLIDINEDIONE), 5.1, II

IMDG/IMO

UN-No	UN1479
Proper Shipping Name	OXIDIZING SOLID, N.O.S.
Hazard Class	5.1
Packing Group	II
EmS No.	F-A, S-Q
Description	UN1479, OXIDIZING SOLID, N.O.S. (1-BROMO-3-CHLORO-5,5-DIMETHYL-2,4-IMIDAZOLIDINEDIONE), 5.1, II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	Yes
Reactive Hazard	Yes

**Clean Water Act **
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
1,3-Dichloro-5,5-dimethyl hydantoin 118-52-5	X	X	X		

International Regulations

Canada
WHMIS Hazard Class
C - Oxidizing materials
D2A - Very toxic materials
E - Corrosive material
B - Flammable/Combustible Materials

16. OTHER INFORMATION

NFPA	**Health Hazard** 3	**Flammability** 1	**Instability** 1	**Physical and Chemical Hazards** OX
HMIS	**Health Hazard** 3*	**Flammability** 1	**Physical Hazard** 1	**Personal Protection** X

Chronic Hazard Star Legend **Indicates a chronic health hazard.*

Prepared By

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date August 1, 2018

Revision Note Updated date

Reference CLX50567-001/50657.001

General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** June 12, 2015 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox Commercial Solutions® Clorox® Germicidal Bleach$_1$**

Other means of identification

EPA Registration Number 5813-100-67619

Recommended use of the chemical and restrictions on use

Recommended use Institutional hard surface disinfecting and sanitizing bleach

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612

Phone: 1-510-271-7000

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies, call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Danger**

Hazard Statements
Causes severe skin burns and eye damage
Causes serious eye damage

Appearance Clear, pale yellow **Physical State** Thin liquid **Odor** Bleach

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves, protective clothing, face protection, and eye protection such as safety glasses.

Precautionary Statements - Response
Immediately call a poison center or doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Specific treatment (see supplemental first aid instructions on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents in accordance with all applicable federal, state, and local regulations.

Hazards not otherwise classified (HNOC)
Although not expected, heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease may be aggravated by exposure to high concentrations of vapor or mist.

Product contains a strong oxidizer. Always flush drains before and after use.

Unknown Toxicity
Not applicable.

Other information
Very toxic to aquatic life with long lasting effects.

Interactions with Other Chemicals
Reacts with other household chemicals such as toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Sodium hypochlorite	7681-52-9	5 - 10	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice Call a poison control center or doctor immediately for treatment advice. Show this safety data sheet to the doctor in attendance.

Eye Contact Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation Move to fresh air. If breathing is affected, call a doctor.

Ingestion Have person sip a glassful of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice.

Protection of First-aiders Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning of eyes and skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
This product causes burns to eyes, skin, and mucous membranes. Thermal decomposition can release sodium chlorate and irritating gases and vapors.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation. Use personal protective equipment as required. For spills of multiple products, responders should evaluate the MSDSs of the products for incompatibility with sodium hypochlorite. Breathing protection should be worn in enclosed and/or poorly-ventilated areas until hazard assessment is complete.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. Do not allow product to enter storm drains, lakes, or streams. See Section 12 for ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Store away from children. Reclose cap tightly after each use. Store this product upright in a cool, dry area, away from direct sunlight and heat to avoid deterioration. Do not contaminate food or feed by storage of this product.

Incompatible Products Toilet bowl cleaners, rust removers, acids, and products containing ammonia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hypochlorite 7681-52-9	None	None	None

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection If splashes are likely to occur: Wear safety glasses with side shields (or goggles) or face shield.

Skin and Body Protection Wear rubber or neoprene gloves and protective clothing such as long-sleeved shirt.

Respiratory Protection If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods. Remove and wash contaminated clothing before re-use. Do not eat, drink, or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Thin liquid		
Appearance	Clear	**Odor**	Bleach
Color	Pale yellow	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	~12	None known
Melting/freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	Not flammable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.1	None known
Water Solubility	Soluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity
Reacts with other household chemicals such as toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known based on information supplied.

Incompatible materials
Toilet bowl cleaners, rust removers, acids, and products containing ammonia.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information .

Inhalation Exposure to vapor or mist may irritate respiratory tract and cause coughing. Inhalation of high concentrations may cause pulmonary edema.

Eye Contact Corrosive. May cause severe damage to eyes.

Skin Contact May cause severe irritation to skin. Prolonged contact may cause burns to skin.

Ingestion Ingestion may cause burns to gastrointestinal tract and respiratory tract, nausea, vomiting, and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hypochlorite 7681-52-9	8200 mg/kg (Rat)	>10000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes. May cause burns to eyes. May cause redness or burns to skin. Inhalation may cause coughing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic Toxicity Carcinogenic potential is unknown.
Target Organ Effects Respiratory system, eyes, skin, gastrointestinal tract (GI).

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
54 g/kg
ATEmix (inhalation-dust/mist)
58 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. Do not allow product to enter storm drains, lakes, or streams.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all applicable federal, state, and local regulations. Do not contaminate food or feed by disposal of this product.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT	Not restricted.
TDG	Not restricted for road or rail.
ICAO	Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.
IATA	Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.
IMDG/IMO	Not restricted, as per IMDG Code 2.10.2.7, Marine Pollutant exception.

15. REGULATORY INFORMATION

Chemical Inventories

TSCA All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.

DSL/NDSL All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb			X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium hypochlorite 7681-52-9	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

EPA Statement
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

> **DANGER: CORROSIVE.** Causes irreversible eye damage and skin burns. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wear protective eyewear and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the restroom. Avoid breathing vapors and use only in a well-ventilated area.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Sodium hypochlorite 7681-52-9	X	X	X	X	
Sodium chlorate 7775-09-9	X	X	X		

International Regulations

Canada
WHMIS Hazard Class
E - Corrosive material

16. OTHER INFORMATION

NFPA	**Health Hazard** 3	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 3	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** B

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date June 12, 2015

Revision Note Revision Section 14.

Reference 1081722/166081.094

General Disclaimer
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End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** New **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox Commercial Solutions® Tilex® Soap Scum Remover & Disinfectant**

Other means of identification

EPA Registration Number 5813-40-67619

Recommended use of the chemical and restrictions on use

Recommended Use Disinfecting bathroom spray cleaner

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
The Clorox Company
1221 Broadway
Oakland, CA 94612
USA
Phone: 1-510-271-7000

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies, call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Serious eye damage/eye irritation	Category 2A

GHS label elements, including precautionary statements

Emergency Overview

Signal word Warning

Hazard statements
Causes serious eye irritation

Appearance Clear, colorless **Physical State** Liquid **Odor** Citrus, green, solvent

Precautionary Statements - Prevention
Wash hands and any exposed skin thoroughly after handling.
Wear eye protection/face protection such as safety glasses.

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)
Not Applicable

Unknown Toxicity
2.155% of the mixture consists of ingredient(s) of unknown toxicity

Other information
No information available.

Interactions with Other Chemicals
Do not use or mix with bleach-containing products. To do so may release small amounts of formaldehyde gas.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Diethylene glycol monobutyl ether	112-34-5	1 - 5	*
Tetrapotassium ethylenediamine tetraacetate (EDTA)	5964-35-2	1 - 5	*
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	85409-23-0	0.1 - 0.2	*
n-Alkyl (5% C12, 60% C14, 30% C16, 5% C18) dimethyl benzyl ammonium chloride	53516-76-0	0.1 - 0.2	*

* The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention immediately if irritation persists.

Skin Contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If irritation develops, call a doctor.

Inhalation Move to fresh air. If breathing is affected, call a doctor.

Ingestion Call a poison control center or doctor immediately. Have person sip a glassful of water if able to swallow. DO NOT induce vomiting unless told to do so by a poison control center or doctor.

Protection of First-aiders Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects Stinging and irritation of eyes.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
No information available

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes. Use personal protective equipment as required.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products Products containing bleach.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Diethylene glycol monobutyl ether 1310-73-2	10 ppm TWA Inhalable fraction and vapor	-	-

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection If splashes are likely to occur, wear safety glasses with side-shields. None required for consumer use.

Skin and Body Protection Wear rubber or neoprene gloves if there is the potential for repeated or prolonged skin contact.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Liquid		
Appearance	Clear	**Odor**	Citrus, green, solvent
Color	Colorless	**Odor Threshold**	No information available

Property	Values	Remarks/ Method
pH	11 - 12.5	None known
Melting/freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	Not flammable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.0	None known
Water Solubility	Soluble in water	None known

9. PHYSICAL AND CHEMICAL PROPERTIES

Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity
Do not use or mix with bleach-containing products. To do so may release small amounts of formaldehyde gas.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known based on information supplied.

Incompatible materials
Products containing bleach.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Exposure to vapor or mist may irritate respiratory tract.

Eye Contact May cause eye irritation.

Skin Contact Prolonged contact may cause irritation.

Ingestion Ingestion may cause irritation to mucous membranes and gastrointestinal irritation, nausea, vomiting, and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol monobutyl ether 112-34-5	3384 mg/kg (Rat)	2700 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive Toxicity No information available

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic Toxicity Carcinogenic potential is unknown
Target Organ Effects Respiratory system, eyes, skin, gastrointestinal tract (GI).

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document
Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all applicable federal, state, and local regulations.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Chemical Inventories

TSCA All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.

DSL/NDSL All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemical which is subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Diethylene glycol monobutyl ether (Glycol ethers category)	112-34-5	1 - 5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

EPA Statement
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

> **WARNING:** Causes substantial but temporary eye injury. Harmful if absorbed through skin. Avoid breathing spray mist. Do not get in eyes, on skin or on clothing. Wear safety glasses or goggles. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Diethylene glycol monobutyl ether (Glycol ethers category) 112-34-5	X		X		

International Regulations

Canada
WHMIS Hazard Class
D2B Toxic materials

16. OTHER INFORMATION

NFPA	**Health Hazard** 2	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 2	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** B

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date New

Revision Note New

Reference 1067476-B/51589001.003/1103604

General Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

THE CLOROX COMPANY - PRODUCT FACT SHEET

Tilex Commercial Solutions Soap Scum Remover Spray 9/32fo

SELLING UNIT SPECIFICATIONS

Length (R to L) [in.]:	4.88
Width (F to B) [in.]:	3
Height [in.]:	10.13
Weight [lbs.]:	2.27

CASE SPECIFICATIONS

Case Dimensions:	15.50 "L x 9.81"W x 10.81"H
Case Weight [lbs.]:	21.5
Case Cube [ft.^{3}]:	0.95

PALLET SPECIFICATIONS

Cases per Layer:	12
Layers per Pallet:	4
Cases per Pallet:	48
Pallet Weight [lbs.]:	
(w/slipsheet):	1032
(w/CHEP Pallet):	1097
Pallet Dimensions	
(w/slipsheet–Actual unit load dimensions)	46.69 "L x 39.25"W x 43.25"H
(w/CHEP Pallet):	48.00 "L x 40.00"W x 48.88"H
Pallet Cube [ft.^{3}]:	
(w/slipsheet–Actual unit load dimensions):	45.87
(w/CHEP Pallet):	54.31
Pallets Per Truck: Based on 53 ft. truck	40

UPC CODE INFORMATION

Case Code:	10044600356041
Unit Code:	044600356044

Case UPC

10 04460035 60 41

Unit UPC

0 44600 35604 4

The Clorox Company

Tilex Commercial Solutions Soap Scum Remover Spray 9/32fo

© 2004, THE CLOROX COMPANY, P.O. BOX 24305, OAKLAND, CA 94623-1305

Date Generated: 10/31/2012

Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: ✓ COMMERCIAL SOLUTIONS® ULTRA CLOROX® GERMICIDAL BLEACH I

Description: CLEAR, LIGHT YELLOW LIQUID WITH CHLORINE ODOR

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. No. 67619-8 Sodium Hypochlorite Solution	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call 1-800-446-1014 For Transportation Emergencies, call Chemtrec 1-800-424-9300

II Health Hazard Data

DANGER: CORROSIVE. May cause severe irritation or damage to eyes and skin. Harmful if Swallowed. The following medical conditions may be aggravated by exposure to high concentrations of vapor or mist; heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease. Some clinical reports suggest a low potential for sensitization upon exaggerated exposure to sodium hypochlorite, particularly on damaged or irritated skin. Routine clinical tests conducted on intact skin with Clorox Liquid Bleach found no sensitization in the test subjects. Under normal consumer use conditions the likelihood of any adverse health effects are low.

FIRST AID:

EYE CONTACT: Rinse with plenty of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT: Wash skin thoroughly with soap and water.

INGESTION: Drink large amounts of water. DO NOT induce vomiting. Call a physician or poison control center immediately.

INHALATION: If breathing problems develop, remove to fresh air.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Sodium hypochlorite CAS # 7681-52-9	6.0 - 7.35%	Not established.
Sodium hydroxide CAS # 1310-73-2	< 0.2%	2 mg/m^3 TLV-STEL[a] 2 mg/m^3 PEL[b]

[a]TLV-STEL = ACGIH Threshold Limit Value - Short Term Exposure Limit
[b]PEL = OSHA Permissible Exposure Limit - Time Weighted Average

None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen list.

IV Special Protection and Precautions

Hygienic Practices: Wear safety glasses. With repeated or prolonged use, wear nitrile, neoprene, or butyl rubber gloves. Wash after contact with product. Avoid breathing vapors.

Engineering Controls: Use general ventilation to minimize exposure to vapor or mist.

Work Practices: Avoid eye and skin contact and inhalation of vapor or mist.

KEEP OUT OF THE REACH OF CHILDREN.

V Transportation and Regulatory Data

DOT: Not restricted per 49CFR172.101(c)(12)(iv).

IMDG: Not restricted per IMDG Code Page 0021 Paragraph 5.3.5.

IATA: Not restricted per IATA D.G.R. Special provision A3.

EPA - SARA Title III/CERCLA:
This product is regulated under Sections 311/312. This product contains no chemicals regulated under Section 313 and contains sodium hypochlorite and sodium hydroxide which are regulated under Section 304/CERCLA.

TSCA Status: All components of this product are on the TSCA Inventory.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material. For spills of multiple products, responders [illegible] hypochlorite. Breathing protection should be worn in enclosed, and/or poorly ventilated areas until hazard assessment is complete.

Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.

VII Reactivity Data

Stable under normal use and storage conditions. Strong oxidizing agent. Reacts with other household chemicals such as toilet bowl cleaners, rust removers, vinegar, acids or ammonia containing products to produce hazardous gases, such as chlorine and other chlorinated species. Prolonged contact with metal may cause pitting or discoloration.

VIII Fire and Explosion Data

Not flammable or explosive.

In a fire, cool containers to prevent rupture and release of sodium chlorate.

IX Physical Data

Boiling point	212°F100°C (decomposes)
Specific gravity (H_2O=1, 21°C)	~1.10
Solubility in water	Complete
pH	~11.4

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DATE PREPARED 4/02

The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: LEMON FRESH CLOROX® DISINFECTING WIPES

Description: MOISTENED TOWELETTE WITH CITRUS FRAGRANCE

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. No. 5813-58	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

Eye Contact: Can cause moderate eye irritation.
Ingestion: Liquid should be practically non-toxic if ingested.
Skin Contact: Prolonged skin contact may produce minor irritation.

FIRST AID: EYES- Flush with plenty of water. Call a physician if irritation persists. IF SWALLOWED- Drink a glassful of water. Call a physician or poison control center. SKIN- Wash thoroughly with soap and water after handling. INHALATION- If breathing is effected, move to fresh air.

Under normal consumer use conditions the likelihood of any adverse health effects are low.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
n-Alkyl (C14, 60%; C16, 30% C12, 5%; C18, 5%) dimethyl-benzyl ammonium chloride	0.145%	Not established
n-Alkyl(C12, 68%, C14, 32%) Dimethyl Ethylbenzyl ammonium chloride	0.145%	Not established
Isopropanol CAS #67-63-0	1- 5%	400 ppm/500 ppm[1] 400 ppm[2]

[1]1998 ACGIH, TLV-TWA/STEL
TLV-TWA- Threshold Limit Value-Time Weighted Average.
STEL- Short Term Exposure Limit
[2]PEL- OHSA Permissible Exposure Limit

None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen lists.

IV Special Protection and Precautions

No special protection or precautions have been identified for using this product under directed consumer use conditions.

The following recommendations are given for production facilities and for other conditions and situations where there is increased potential for accidental, large-scale or prolonged exposure.

Hygienic Practices- Wear safety glasses. Use rubber or nitrile gloves if in contact liquid, especially for prolonged periods.
Engineering Controls: Use general ventilation to minimize exposure to vapor or mist.
Work Practices: Avoid eye and skin contact and inhalation of vapor or mist. Avoid contact with food. Not for personal cleansing.

KEEP OUT OF THE REACH OF CHILDREN

V Transportation and Regulatory Data

U.S. DOT, IATA, IMG Hazard Class: Not restricted.

U.S. DOT Proper Shipping Name: None

EPA- SARA Title III/CERCLA: Product may be regulated under Sections 311/312. This product contains no chemicals regulated under Section 304/CERCLA or Section 313.

TSCA/DSL: All chemicals in this product are listed on the TSCA Inventory. The DSL status for some components has not been determined.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed down material.

Waste Disposal: Disposal must be made in accordance with applicable federal, state and local regulations.

VII Reactivity Data

Stability: Mixing with sodium hypochlorite may release small amounts of formaldehyde gas.

Storage/Disposal: Do not use or store near heat or open flame.

VIII Fire and Explosion Data

Flashpoint: >119°F Method: Closed cup.
Unusual Fire and Explosion Hazards: None

IX Physical Data

Flashpoint	>119°F
Specific Gravity	0.99 g/cc.
pH	5.0-6.0
Solubility in Water	Liquid is completely dispersible

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SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** June 8, 2017 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox Commercial Solutions® Formula 409® Cleaner Degreaser Disinfectant**

Other means of identification

EPA Registration Number 67619-10

Recommended use of the chemical and restrictions on use

Recommended Use General purpose cleaner, degreaser, and disinfectant

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612

Phone: 1-510-271-7000

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 3

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Warning**

Hazard statements
Causes mild skin irritation

No pictogram required.

Appearance Clear **Physical State** Thin liquid **Odor** Floral, citrus

Precautionary Statements - Prevention
None

Precautionary Statements - Response
If skin irritation occurs: Get medical advice.

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
0.2% of the mixture consists of ingredient(s) of unknown toxicity

Other information
Very toxic to aquatic life with long-lasting effects.

Interactions with Other Chemicals
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Lauramine oxide	1643-20-5	0.5 - 1.5	*
n-Alkyl (40% C12, 50% C14, 10% C16) dimethyl benzyl ammonium chloride	68424-85-1	0.2 - 0.4	*

* The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation Move to fresh air. If breathing is affected, call a doctor.

Ingestion Call a poison control center or doctor immediately for treatment advice. Have person sip a glassful of water if able to swallow. DO NOT induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects Mild irritation of eyes and skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
No information available

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes and skin.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions See Section 12 for additional ecological Information

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool, and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Lauramine oxide 1643-20-5	None	None	None
n-Alkyl (40% C12, 50% C14, 10% C16) dimethyl benzyl ammonium chloride 68424-85-1	None	None	None

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection	If splashes are likely to occur, wear safety glasses with side-shields. None required for consumer use.
Skin and Body Protection	No special protective equipment required.
Respiratory Protection	If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene Measures	Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes, or clothing. Do not eat, drink, or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Thin liquid		
Appearance	Clear	**Odor**	Floral, citrus
Color	Clear	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	9 - 11.5	None known
Melting/freezing point	No data available	None known
Boiling Point/Range	No data available	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.0	None known
Water Solubility	Soluble in water.	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity
No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known.

Incompatible materials
None known.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Exposure to vapor or mist may irritate respiratory tract.
Eye Contact	May cause eye irritation.
Skin Contact	Prolonged contact may cause irritation.
Ingestion	Ingestion may cause irritation to mucous membranes and gastrointestinal irritation, nausea, vomiting, and diarrhea.

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes and skin redness.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic Effects	No information available.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive Toxicity	No information available
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	No known effect.
Target Organ Effects	Respiratory system, eyes, skin, gastrointestinal tract (GI).
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document Not applicable.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all applicable federal, state, and local regulations.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. REGULATORY INFORMATION

Chemical Inventories

TSCA	All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.
DSL/NDSL	All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

EPA Statement
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

> **CAUTION:** Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Avoid contact with foods.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Ethanolamine 141-43-5	X	X	X	-	X

International Regulations

Canada
WHMIS Hazard Class
D2B Toxic Materials

16. OTHER INFORMATION

NFPA	**Health Hazard**	1	**Flammability**	0	**Instability**	0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard**	1	**Flammability**	0	**Physical Hazard**	0	**Personal Protection** B

Prepared By

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Preparation/Revision Date January 5, 2015

Revision Date June 8, 2017

Revision Note Updated to remove green dye.

Reference 1050911/166962.001

General Disclaimer

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End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** July 24, 2018 **Revision Number** 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox® Germicidal Bleach**

Other means of identification

EPA Registration Number 67619-32

Recommended use of the chemical and restrictions on use

Recommended use Institutional hard surface disinfecting and sanitizing bleach

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
The Clorox Company
1221 Broadway
Oakland, CA 94612

Phone: 1-510-271-7000

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies, call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Danger**

Hazard Statements
Causes severe skin burns and eye damage
Causes serious eye damage

Appearance Clear, pale yellow **Physical State** Thin liquid **Odor** Bleach

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves, protective clothing, face protection, and eye protection such as safety glasses.

Precautionary Statements - Response
Immediately call a poison center or doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Specific treatment (see supplemental first aid instructions on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents in accordance with all applicable federal, state, and local regulations.

Hazards not otherwise classified (HNOC)
Although not expected, heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease may be aggravated by exposure to high concentrations of vapor or mist.

Product contains a strong oxidizer. Always flush drains before and after use.

Unknown Toxicity
Not applicable.

Other information
Very toxic to aquatic life with long lasting effects.

Interactions with Other Chemicals
Reacts with other household chemicals such as toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Sodium hypochlorite	7681-52-9	5 - 10	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice Call a poison control center or doctor immediately for treatment advice. Show this safety data sheet to the doctor in attendance.

Eye Contact Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation Move to fresh air. If breathing is affected, call a doctor.

Ingestion Have person sip a glassful of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice.

Protection of First-aiders Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning of eyes and skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
This product causes burns to eyes, skin, and mucous membranes. Thermal decomposition can release sodium chlorate and irritating gases and vapors.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation. Use personal protective equipment as required. For spills of multiple products, responders should evaluate the MSDSs of the products for incompatibility with sodium hypochlorite. Breathing protection should be worn in enclosed and/or poorly-ventilated areas until hazard assessment is complete.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. Do not allow product to enter storm drains, lakes, or streams. See Section 12 for ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Store away from children. Reclose cap tightly after each use. Store this product upright in a cool, dry area, away from direct sunlight and heat to avoid deterioration. Do not contaminate food or feed by storage of this product.

Incompatible Products Toilet bowl cleaners, rust removers, acids, and products containing ammonia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hypochlorite 7681-52-9	None	None	None

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection If splashes are likely to occur: Wear safety glasses with side shields (or goggles) or face shield.

Skin and Body Protection Wear rubber or neoprene gloves and protective clothing such as long-sleeved shirt.

Respiratory Protection If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods. Remove and wash contaminated clothing before re-use. Do not eat, drink, or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Thin liquid		
Appearance	Clear	**Odor**	Bleach
Color	Pale yellow	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	~12	None known
Melting/freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	Not flammable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.1	None known
Water Solubility	Soluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity
Reacts with other household chemicals such as toilet bowl cleaners, rust removers, acids, or products containing ammonia to produce hazardous irritating gases, such as chlorine and other chlorinated compounds.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known based on information supplied.

Incompatible materials
Toilet bowl cleaners, rust removers, acids, and products containing ammonia.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information .

Inhalation Exposure to vapor or mist may irritate respiratory tract and cause coughing. Inhalation of high concentrations may cause pulmonary edema.

Eye Contact Corrosive. May cause severe damage to eyes.

Skin Contact May cause severe irritation to skin. Prolonged contact may cause burns to skin.

Ingestion Ingestion may cause burns to gastrointestinal tract and respiratory tract, nausea, vomiting, and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hypochlorite 7681-52-9	8200 mg/kg (Rat)	>10000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes. May cause burns to eyes. May cause redness or burns to skin. Inhalation may cause coughing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic Toxicity Carcinogenic potential is unknown.
Target Organ Effects Respiratory system, eyes, skin, gastrointestinal tract (GI).

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
54 g/kg
ATEmix (inhalation-dust/mist)
58 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. Do not allow product to enter storm drains, lakes, or streams.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all applicable federal, state, and local regulations. Do not contaminate food or feed by disposal of this product.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT	Not restricted.
TDG	Not restricted for road or rail.
ICAO	Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.
IATA	Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.
IMDG/IMO	Not restricted, as per IMDG Code 2.10.2.7, Marine Pollutant exception.

15. REGULATORY INFORMATION

Chemical Inventories

TSCA All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.

DSL/NDSL All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb			X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium hypochlorite 7681-52-9	100 lb	–	RQ 100 lb final RQ RQ 45.4 kg final RQ

EPA Statement
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

> **DANGER: CORROSIVE.** Causes irreversible eye damage and skin burns. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wear protective eyewear and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the restroom. Avoid breathing vapors and use only in a well-ventilated area.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Sodium hypochlorite 7681-52-9	X	X	X	X	
Sodium chlorate 7775-09-9	X	X	X		

International Regulations

Canada
WHMIS Hazard Class
E - Corrosive material

16. OTHER INFORMATION

NFPA	**Health Hazard**	3	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazard**	3	**Flammability** 0	**Physical Hazard** 0	**Personal Protection**	B

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date July 24, 2018

Revision Note Revised Section 1.

Reference 1064453/166081.094

General Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

COLGATE-PALMOLIVE Company
MATERIAL SAFETY DATA SHEET

This industrial Material Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Softsoap Cream Liquid Hand Soap

Effective Date: April 11, 2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COLGATE-PALMOLIVE COMPANY **300 Park Avenue** **New York NY 10022** PRODUCT NAME: Softsoap Cream Liquid Hand Soap CAS NUMBER: Not applicable – product is a mixture GENERAL USE: Formulated liquid hand soap	EMERGENCY TELEPHONE NUMBER: For emergency involving spill, leak, fire, exposure or accident, call CHEMTREC (800) 424-9300, day or night For MEDICAL EMERGENCIES involving this product call: (888) 489-3861

2. **COMPOSITION/INFORMATION ON INGREDIENTS** OSHA-REGULATED COMPONENTS (present at a concentration of > or = 1%): Component CAS# % PEL TLV Not Applicable	The following components, present at a concentration of > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA: Component CAS# % PEL TLV Not Applicable

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE CONTACT: Causes eye irritation on direct contact.

SKIN CONTACT: May cause skin irritation on prolonged or repeated contact.

INGESTION: May be harmful if swallowed in large quantities.

INHALATION: No adverse effects expected.

4. FIRST AID MEASURES

EYE CONTACT: Flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

SKIN CONTACT: Rinse area with plenty of water. Get medical attention if irritation persists.

INGESTION: Drink 1-2 glasses of water. Get medical attention.

INHALATION: Not Applicable.

5. FIRE FIGHTING MEASURES

Flash Point (Method): Not Applicable
Extinguishing Media: Water spray, all-purpose dry chemical, CO2.
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

7. HANDLING AND STORAGE

Store in a tightly closed container in a cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONTROLS: Avoid eye and skin contact.

PROTECTIVE CLOTHING: The use of safety goggles and protective gloves is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor:	Viscous liquid.
pH:	5.7 - 7.4

10. STABILITY AND REACTIVITY

GENERAL: This product is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS: None known.

HAZARDOUS DECOMPOSITION: None known.

11. TOXICOLOGICAL INFORMATION

This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the MSDS.

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with local, state, and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water or onto the ground.

14. TRANSPORTATION

Not regulated as a DOT hazardous material.

15. REGULATORY INFORMATION

RCRA (40 CFR 261, Subpart D): Not Applicable **CLEAN WATER ACT**: Not Applicable **CLEAN AIR ACT:** Contains diethanolamine which is a Section 112 material. Milk & Honey variant contains propylene glycol and sodium benzoate which are Section 111 materials. **SARA:** Sections 301-304 (Threshold planning quantity - TPQ) 40 CFR 355: Not Applicable **Section 313** (Toxic chemical release reporting) 40 CFR 372: The following chemicals must be reported under SARA 313: Not Applicable **CERCLA**: Section 102 (Reportable Quantity - RQ) 40 CFR 302: The Reportable Quantity (RQ) for this product to the environment is 50,000 lbs. based on the presence of diethanolamine (0.2%). Releases greater than or equal to 50,000 lbs. must be reported to the National Response Center (NRC) immediately: 800-424-8802.	**New Jersey Right to Know Hazardous Substance List:** This product contains the following components subject to reporting requirements: Diethanolamine **Pennsylvania Hazardous Substance List:** This product contains the following components subject to reporting requirements: Sodium sulfate, diethanolamine, glycerin; Milk & Honey variant contains propylene glycol **Massachusetts Substance List:** This product contains the following components subject to reporting requirements: Sodium sulfate, diethanolamine **Canada: Workplace Hazardous materials Information System (WHMIS)-listed material.** This product contains the following components subject to reporting requirements: Regular variant contains sodium lauryl sulfate

16. OTHER INFORMATION

Effective Date: April 11, 2006
Supersedes MSDS dated August 18, 2005
MSDS Status: Revised Section 15

The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

SAFETY DATA SHEET

Issuing Date: 18-Jun-2015 **Revision Date:** 18-Jun-2015 **Version** 1

1. IDENTIFICATION

Product Name	Comet® Disinfecting Sanitizing Bathroom Cleaner - Ready to Use
Product Code(s)	3-20
Product ID:	15154320_C_PROF_NG
Product Type:	Finished Product - Professional Use Only
Recommended Use	Disinfectant Sanitizer
Restrictions on Use	Do not mix with other cleaning products or chemicals as irritating fumes may be formed.
Manufacturer	Procter & Gamble Professional 2 P&G Plaza Cincinnati, Ohio 45202 Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-332-7787
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category	
Acute toxicity - Oral	Category 4
Eye Damage / Irritation	Category 2B
Corrosive to metals	Category 1

Signal Word WARNING

Hazard Statements

Causes eye irritation
Harmful if swallowed
May be corrosive to metals

Hazard pictograms

Precautionary Statements - Prevention	Wash hands thoroughly after handling Do not eat, drink or smoke when using this product Keep only in original container Do not mix with other cleaning products or chemicals as irritating fumes may be formed
Precautionary Statements - Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention IF SWALLOWED: Rinse with plenty of water Drink 1 or 2 glasses of water Call a POISON CENTER or doctor/physician if you feel unwell Absorb spillage to prevent material damage
Precautionary Statements - Storage	Store in corrosive resistant container
Precautionary Statements - Disposal	Dispose of contents/container in accordance with local regulation
Hazards not otherwise classified (HNOC)	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Dipropylene Glycol Butoxy Ether	-	No	29911-28-2	5 - 10
Citric acid	-	No	77-92-9	1 - 5
1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., inner salts	-	No	68139-30-0	1 - 5
Benzenesulfonic acid, (1-methylethyl)-, sodium salt (1:1)	-	No	28348-53-0	1 - 5
Alcohols, C9-11, ethoxylated	-	No	68439-46-3	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact	Rinse with plenty of water. Get medical attention immediately if irritation persists.
Skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO_2, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store in corrosive resistant container.

Incompatible products Do not mix with other cleaning products or chemicals as irritating fumes may be formed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines No exposure limits noted for ingredient(s).

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	clear
Odor	Scented
Odor threshold	No information available

Property	Values	Note
pH value	3	
Melting/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	> 93.3 °C / > 200 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.042	

Water solubility	100%
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available .
Decomposition temperature	No information available .
Viscosity of Product	<10 cps
VOC Content (%)	Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid Do not mix with other cleaning products or chemicals as irritating fumes may be formed.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	May be harmful if swallowed.
Eye contact	Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	May be harmful if swallowed.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	Irritating to eyes.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Dipropylene Glycol Butoxy Ether	29911-28-2	3700 mg/kg bw (OECD 401)	> 2000 mg/kg bw (OECD 402)	> 2.04 mg/L air (OECD 403)
Citric acid	77-92-9	5400 mg/kg bw (//OECD 401)	> 2000 mg/kg bw (OECD 402)	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products	Products covered by this SDS, in their original form, when disposed as waste, are corrosive hazardous waste, D002, according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.
California Hazardous Waste Codes (non-household setting)	331

14. TRANSPORT INFORMATION

DOT

UN no	UN1760
UN Proper shipping name	Corrosive liquids, n.o.s.
Description	UN1760, Corrosive liquid, n.o.s , (citric acid), 8, III , Ltd. Qty.
Hazard Class	8
Packing Group	III

IMDG

UN Number	UN1760
UN Proper shipping name	Corrosive liquid, n.o.s.
Description	UN1760, Corrosive liquid, n.o.s , (citric acid), 8, III , Ltd. Qty.
Transport hazard class(es)	8
Packing Group	III

IATA

UN no	UN1760
UN Proper shipping name	Corrosive liquid, n.o.s.
Description	UN1760, Corrosive liquid, n.o.s, (citric acid), 8, III , Ltd. Qty.
Hazard Class	8
Packing Group	III

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)
This product does not contain any substances regulated by state right-to-know regulations

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act

FIFRA
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

EPA Registration number: 3573-54
CAUTION
May be harmful if swallowed
Causes eye irritation

16. OTHER INFORMATION

HMIS Ratings

Health hazard	3
Flammability	1
Physical hazard	0

Health hazard	3
Flammability	1
Instability	0

Issuing Date:	18-Jun-2015
Revision Date:	18-Jun-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

ITEM: 2AEU6 - Cordless Drill/Driver Kit 18.0V 1/

MSDS: C2195 **ORDER: 0122785584** **LP NUMBER: U843436638**

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - C2195

Associated Grainger Items
5JC25, 11U032, 2904506, 6350373, 23X761, 23X762, 23X763, 23X764, 23X765 23X766, 23X767, 23X768, 23X769, 23X770, 23X771, 2PB23, 2PB24, 2PB25, 2HVT1 2HVT2, 2HVT3, 8UAJ3, 8VRD1, 9KCG9, 9MD73, 9PXR2, 1PKW3, 2PB22, 6004515 6250817, 6272271, 1XGN4, 1XGN5, 3CRK8, 3FRN3, 6042941, 6354542, 6361591 6347248, 2XY55, 2XY56, 2XY57, 1GEA4, 1GEA5, 1GEA6, 1GEA7, 1GEA8, 1GEA9, 1GEB1 1GEB2, 1GEB3, 1GEB4, 1GEB5, 1GEB6, 1GEB7, 1GEB8, 1GEB9, 1GEC1, 1GEC2, 1GEC3 1GEC4, 1GEC5, 1GEC6, 1GEC7, 1GEC8, 1GEC9, 1GED1, 1GED4, 1EC28, 1EC29, 1EC30 1EC31, 1EC32, 1EZ37, 1EZ38, 1EZ39, 1PX99, 1PZ10, 1PZ11, 1PZ12, 1PZ14, 1PZ15 1PZ16, 1PZ17, 1PZ18, 1PZ19, 1PZ20, 1PZ21, 1PZ22, 1PZ23, 1PZ24, 1PZ25, 1PZ26 1PZ27, 1PZ28, 1RD18, 1RD19, 1VK69, 2NY21, 2NY22, 2NY24, 2NY25, 3AB13, 3AB14 3EB89, 3EP90, 3KA75, 3KA76, 3KA77, 3KA78, 3KA79, 3KA80, 3LA56, 3LA57, 3LA58 3LA75, 3LA76, 3MY90, 3PA28, 3WE97, 3WE98, 3WY80, 4864S, 4BU70, 4EB26, 4EB27 4EB28, 4EB29, 4EB30, 4EB31, 4EB32, 4EB33, 4EB34, 4EB35, 4EB36, 4EB37, 4EB38 4EB39, 4EB40, 4EB41, 4EB42, 4EB43, 4EB86, 4EB87, 4EB88, 4EB89, 4GA68, 4GA69 4GA70, 4GA75, 4GA76, 4GA77, 4GA79, 4GA80, 4GD32, 4GD74, 4JB70, 4JB71, 4JB76 4JB81, 4JB82, 4JB83, 4JB84, 4LF47, 4LF48, 4VW99, 4VX20, 4VX21, 4WL38, 4YB73 4YB77, 4YK29, 4YK30, 4YK32, 4YK33, 4YL20, 4YL22, 4YL23, 4YL24, 4YL25, 4YL26 5A190, 5MP39, 5MP74, 5MP77, 5MP80, 5MP81, 5MP82, 5MP83, 5MP84, 5MP85, 5MP86 5ZM44, 5ZM45, 6GD51, 6GD52, 6HD91, 6RM72, 6RM73, 6RM74, 6RM75, 6RM76, 6RM77 6RM78, 6RM79, 6XG84, 6XG85, 6XJ68, 9GPP1, 9GPP2, 9TM35, 1AUZ2, 1AUZ3, 1AUZ4 1PJK8, 6275051, 6354270, 1WKL9, 1WXN1, 1WXN2, 7YR35, 7YR36, 7YR37, 7YR38 7YR39, 7YR40, 7YR41, 2AEU4, 2AEU6, 2AEU7, 2AEU8, 2AEU9, 2AEV1, 2AEV3, 2AEV4 2AEV5, 2AEV7, 2AEV8, 2AEV9, 2AEW1, 2AEW2, 2AEW3, 2HNX5, 2HNX6, 2VDJ2, 2VDJ3 2VDJ4, 2VDJ9, 2RDZ5, 3HFV7, 3HFV8, 3HFV9, 3HFW1, 3HFW2, 3HFW3, 3HFW4, 3HFW5 3HFW6, 3HFW7, 3HFW8, 3HFW9, 3HFX1, 3HFX2, 3HFX3, 3HFX4, 3HFX5, 3HFX6, 3HFX8 3HFX9, 3HFY1, 3HFY2, 3HFY3, 3EME5, 5RHP1, 2XY64, 1MEW4, 1MEW5, 4NLP9, 1MEW6 2XY63, 2XY65, 4NLP5, 4NLP6, 4NLP8, 4NLR1, 4NLR2, 4NLR3, 4NLP7, 2XY62, 2VDK6 4LEX4, 7AH22, 7AH26, 3MJ64, 3KNJ2, 9XH24, 9XJA7, 4NZT1, 4NZT2, 4NZT3, 4NZT4 4NZT5, 4NZT6, 4NZT7, 4NZT8, 4NZT9, 4NZU1, 4NZU2, 4NZU3, 4NZU4, 4NZU5, 4NZU6 4NZU7, 4NZU8, 4NZU9, 4NZV1, 4NZV2, 4NZV3, 4RE59, 4RE61, 4RE63, 4RE65, 4RE67 4RE69, 4RE71, 4RE75, 4RE77, 4RE79, 4RE81, 4RE83, 4RE85, 4RE87, 4RE89, 4RE91 4RE93, 4RE95, 4RE97, 4RE99, 4RU11, 4RU13, 4RU15, 4RU16, 4RU17, 4RU18, 4RU19 4RU20, 8EY63, 9VDW2, 3YZJ8, 3YZJ6, 3YZK9, 3YZJ4, 3YZH9, 3YZJ2, 3KFZ9, 3KGA3 5YN52, 3YZF1, 1UNB7, 1UNB8, 3YZG8, 3YZG6, 4VA81, 3YZH5, 3YZH1, 3YZH3, 6XZ28 1UNC6, 1UNC4

SAFETY DATA SHEET FOR CHEMICAL PRODUCTS (SDS)

PRODUCT NAME: CYLINDRICAL NICKEL CADMIUM BATTERY CELL

ESTABLISHMENT / REVISION: FEB. 10, 2011

REFERENCE NUMBER: CA-CE-E01-09

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CYLINDRICAL NICKEL CADMIUM BATTERY

COMPANY NAME: SANYO ELECTRIC CO., LTD. MOBILE ENERGY COMPANY

ADDRESS:
222-1 KAMINAIZEN
SUMOTO CITY, HYOGO
JAPAN

TELEPHONE NUMBER: +81-799-24-4111

TELEFAX NUMBER: +81-799-23-2995

EMERGENCY TELEPHONE NUMBER:
(WEEKDAY): +81-799-23-2881
(NIGHT AND HOLIDAY): +81-799-24-4131

2. HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARD AND EFFECTS:

FOR THE BATTERY CELL, CHEMICAL MATERIALS ARE STORED IN A HERMETICALLY SEALED METAL CASE, DESIGNED TO WITHSTAND TEMPERATURES AND PRESSURES ENCOUNTERED DURING NORMAL USE. AS A RESULT, DURING NORMAL USE, THERE IS NO PHYSICAL DANGER OF IGNITION OR EXPLOSION AND CHEMICAL DANGER OF HAZARDOUS MATERIALS' LEAKAGE.

HOWEVER, IF EXPOSED TO A FIRE, ADDED MECHANICAL SHOCKS, DECOMPOSED, ADDED ELECTRIC STRESS BY MISUSE, THE GAS RELEASE VENT WILL BE OPERATED. THE BATTERY CELL CASE WILL BE BREACHED AT THE EXTREME. HAZARDOUS MATERIALS MAY BE RELEASED. MOREOVER, IF HEATED STRONGLY BY THE SURROUNDING FIRE, ACRID OR HARMFUL FUME MAY BE EMITTED.

HUMAN HEALTH EFFECTS:

INHALATION:
THE ELECTROLYTE INHALATION AFFECTS THE RESPIRATORY TRACT MEMBRANE AND THE LUGS. CADMIUM FUME MAY CAUSE A COUGH, CHEST PAIN AND DYSPNEA. BRONCHITIS AND PNEUMONIA WILL BE OCCURRED. PROBABLY, IT IS CARCINOGEN.

SKIN CONTACT:
THE ELECTROLYTE SKIN CONTACT AFFECTS THE SKIN SERIOUSLY AND MAY CAUSE DERMATITIS.

EYE CONTACT:
THE ELECTROLYTE LEAKED FROM THE BATTERY CELL IS STRONG ALKALI. WHEN IT GOES INTO AN EYE, THE CORNEA MAY BE AFFECTED AND IT MAY LEAD TO BLINDNESS.

INGESTION:
THE ELECTROLYTE INGESTION IRRITATES THE MOUTH AND THE THROAT SERIOUSLY RESULTS IN VOMITING, NAUSEA, HEMATEMESIS, STOMACH PAINS AND DIARRHEA.

ENVIRONMENTAL EFFECTS:
SINCE A BATTERY CELL REMAINS IN THE ENVIRONMENT, DO NOT THROW OUT IT INTO THE ENVIRONMENT.

SPECIFIC HAZARDS: AS PREVIOUSLY DESCRIBED.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE OR PREPARATION: PREPARATION

INFORMATION ABOUT THE CHEMICAL NATURE OF PRODUCT:

COMMON CHEMICAL NAME / GENERAL NAME	CAS NUMBER	CONCENTRATION / CONCENTRATION RANGE	CLASSIFICATION AND HAZARD LABELING
NICKEL, NICKEL COMPOUNDS	7440-02-0	15-40%	SPECIFIC HAZARD
CADMIUM, CADMIUM COMPOUNDS	7440-43-9	10-40%	SPECIFIC HAZARD
COBALT COMPOUNDS	7440-48-4	0-3%	SPECIFIC HAZARD
CARBON BLACK	1333-86-4	0-1%	SPECIFIC HAZARD
IRON	7439-89-6	20-65%	
POTASSIUM HYDROXIDE SODIUM HYDROXIDE LITHIUM HYDROXIDE	1310-58-3 1310-73-2 1310-65-2	0-5%	ACUTE TOXICITY CORROSIVITY IRRITANT PROPERTY

4. FIRST-AID MEASURES

INTERNAL CELL MATERIALS OF AN OPENED BATTERY CELL:

INHALATION:
COVER THE VICTIM IN A BLANKET, MOVE TO THE PLACE OF FRESH AIR AND KEEP QUIET. SEEK MEDICAL ATTENTION IMMEDIATELY. WHEN DYSPNEA (BREATHING DIFFICULTY) OR ASPHYXIA (BREATH-HOLD), GIVE ARTIFICIAL RESPIRATION IMMEDIATELY.

SKIN CONTACT:
REMOVE CONTAMINATED CLOTHES AND SHOES IMMEDIATELY. WASH THE ADHERENCE OR CONTACT REGION WITH SOAP AND PLENTY OF WATER. SEEK MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:
IMMEDIATELY FLUSH EYES WITH WATER CONTINUOUSLY FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION IMMEDIATELY.

A BATTERY CELL AND INTERNAL CELL MATERIALS OF AN OPENED BATTERY CELL

INGESTION: DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION IMMEDIATELY.

5. FIRE-FIGHTING MEASURE

ALTHOUGH A BATTERY CELL IS NOT FLAMMABILITY, IN CASE OF FIRE, MOVE IT TO THE SAFE PLACE QUICKLY.

THE FOLLOWING MEASURES ARE TAKEN WHEN IT CANNOT BE MOVED.

SUITABLE EXTINGUISHING MEDIA:
DRY SAND, CHEMICAL POWDER FIRE EXTINGUISHING MEDIUM.

SPECIFIC HAZARDS: ACRID OR HARMFUL FUME IS EMITTED DURING FIRE.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:
PROTECTIVE EQUIPMENT WRITTEN IN SECTION 8.

6. ACCIDENTAL RELEASE MEASURES

INTERNAL CELL MATERIALS, SUCH AS ELECTROLYTE LEAKED FROM BATTERY CELL, ARE CAREFULLY DEALT WITH ACCORDING TO THE FOLLOWINGS.

PERSONAL PRECAUTIONS:
FORBID UNAUTHORIZED PERSON TO ENTER. REMOVE LEAKED MATERIALS WITH PROTECTIVE EQUIPMENT WRITTEN IN SECTION 8.

ENVIRONMENTAL PRECAUTIONS: DO NOT THROW OUT INTO THE ENVIRONMENT.

METHOD OF RECOVERY AND NEUTRALIZATION:
DILUTE THE LEAKED ELECTROLYTE WITH WATER AND NEUTRALIZE WITH DILUTED SULFURIC ACID. THE LEAKED SOLID IS MOVED TO A CONTAINER. THE LEAKED PLACE IS FULLY FLUSHED WITH WATER.

7. HANDLING AND STORAGE

HANDLING:

TECHNICAL MEASURES:

PREVENTION OF USER EXPOSURE: NOT NECESSARY UNDER NORMAL USE.

PREVENTION OF FIRE AND EXPLOSION: NOT NECESSARY UNDER NORMAL USE.

PRECAUTION FOR SAFE HANDLING: DO NOT DAMAGE OR REMOVE THE EXTERNAL TUBE.

SPECIFIC SAFE HANDLING ADVICE:
NEVER THROW OUT CELLS IN A FIRE OR EXPOSE TO HIGH TEMPERATURES. DO NOT SOAK CELLS IN WATER AND SEAWATER. DO NOT EXPOSE TO STRONG OXIDIZERS. DO NOT GIVE A STRONG MECHANICAL SHOCK OR THROW DOWN. NEVER DISASSEMBLE, MODIFY OR DEFORM. DO NOT CONNECT THE POSITIVE TERMINAL TO THE NEGATIVE TERMINAL WITH ELECTRICALLY CONDUCTIVE MATERIAL. IN THE CASE OF CHARGING, USE ONLY DEDICATED CHARGER OR CHARGE ACCORDING TO THE CONDITIONS SPECIFIED BY SANYO.

STORAGE:

TECHNICAL MEASURES:

STORAGE CONDITIONS (SUITABLE TO BE AVOIDED):
AVOID DIRECT SUNLIGHT, HIGH TEMPERATURE, HIGH HUMIDITY.

STORE IN COOL PLACE (TEMPERATURE: -30 - 35 DEGREE C, HUMIDITY: 45 - 85%).

INCOMPATIBLE PRODUCTS:
CONDUCTIVE MATERIALS, WATER, SEAWATER, STRONG OXIDIZERS AND STRONG ACIDS

PACKING MATERIAL (RECOMMENDED, NOT SUITABLE):
INSULATIVE AND TEAR-PROOF MATERIALS ARE RECOMMENDED.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES:
NO ENGINEERING MEASURE IS NECESSARY DURING NORMAL USE. IN CASE OF INTERNAL CELL MATERIALS' LEAKAGE, THE INFORMATION BELOW WILL BE USEFUL.

CONTROL PARAMETERS:

COMMON CHEMICAL NAME / GENERAL NAME	ACGIH (2010) TLV-TWA	BEI
NICKEL, NICKEL COMPOUNDS	(AS Ni) METAL: 1.5 MG/M3 SOLUBLE COMPOUNDS: 0.1 MG/M3 INSOLUBLE COMPOUNDS: 0.2 MG/M3	
CADMIUM, CADMIUM COMPOUNDS	(AS Cd) SIMPLE SUBSTANCE: 0.01 MG/M3 COMPOUNDS: 0.002 MG/M3	IN URINE: 5 MICRO G/G IN BLOOD: 5 MICRO G/L
COBALT COMPOUNDS	(AS Co) 0.02 MG/M3	IN URINE: 15 MICRO G/L IN BLOOD: 1 MICRO G/L
CARBON BLACK	3.5 MG/M3	
POTASSIUM HYDROXIDE		
SODIUM HYDROXIDE		
LITHIUM HYDROXIDE	0.025 MG/M3	

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, INC.

TLV-TWA: THRESHOLD LIMIT VALUE-TIME WEIGHTED AVERAGE CONCENTRATION

BEI: BIOLOGICAL EXPOSURE INDICES

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION: PROTECTIVE MASK

HAND PROTECTION: PROTECTIVE GLOVES

EYE PROTECTION:
PROTECTIVE GLASSES DESIGNED TO PROTECT AGAINST LIQUID SPLASHES

SKIN AND BODY PROTECTION:
WORKING CLOTHES WITH LONG SLEEVE AND LONG TROUSERS

A BATTERY CELL IS NOT APPLIED TO TOXIC SUBSTANCES CONTROL ACT (TSCA), BECAUSE IT IS NOT A CHEMICAL SUBSTANCE BUT AN ARTICLE.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

PHYSICAL STATE: SOLID

FORM: CYLINDRICAL

COLOR: METALLIC COLOR (WITHOUT TUBE)

ODOR: NO ODOR

pH: NA

SPECIFIC TEMPERATURES/TEMPERATURE RANGES AT WHICH CHANGES IN PHYSICAL STATE OCCUR: THERE IS NO USEFUL INFORMATION FOR THE PRODUCT AS A MIXTURE.

FLASH POINT: NA

EXPLOSION PROPERTIES: NA

DENSITY: ABOUT 2.4-4.0 G/CM3

SOLUBILITY, WITH INDICATION OF THE SOLVENT(S): INSOLUBLE IN WATER

10. STABILITY AND REACTIVITY

STABILITY: STABLE UNDER NORMAL USE

HAZARDOUS REACTIONS OCCURRING UNDER SPECIFIC CONDITIONS:
BY MISUSE OF A BATTERY CELL OR THE LIKE, OXYGEN OR HYDROGEN ACCUMULATES IN THE CELL AND THE INTERNAL PRESSURE RISES. THESE GASES MAY BE EMITTED THROUGH THE GAS RELEASE VENT. WHEN FIRE IS NEAR, THESE GASES MAY TAKE FIRE.

WHEN A BATTERY CELL IS HEATED STRONGLY BY THE SURROUNDING FIRE, ACRID OR HARMFUL FUME MAY BE EMITTED.

CONDITIONS TO AVOID: DIRECT SUNLIGHT, HIGH TEMPERATURE AND HIGH HUMIDITY

MATERIALS TO AVOID:
CONDUCTIVE MATERIALS, WATER, SEAWATER, STRONG OXIDIZERS AND STRONG ACIDS

HAZARDOUS DECOMPOSITION PRODUCTS:
ACRID OR HARMFUL FUME IS EMITTED DURING FIRE.

11. TOXICOLOGICAL INFORMATION

THERE IS NO DATA AVAILABLE ON THE PRODUCT ITSELF. THE INFORMATION OF THE INTERNAL CELL MATERIALS IS AS FOLLOWS.

NICKEL, NICKEL COMPOUNDS:

ACUTE TOXICITY:

ORAL:
GHS: OUT OF CATEGORY.

SKIN: UNKNOWN.

INHALATION (GAS) GHS: EXEMPT FROM A CLASSIFICATION.

INHALATION (STEAM): UNKNOWN.

INHALATION (MIST): UNKNOWN.

SKIN CORROSIVITY: UNKNOWN.

SERIOUS DAMAGE AND IRRITANT PROPERTY FOR EYES: UNKNOWN.

RESPIRATORY OR SKIN SENSITIZATION:
RESPIRATORY SENSITIZATION:
GHS: CATEGORY 1

THE ALLERGY, ASTHMA OR BREATHING DIFFICULTIES MIGHT BE CAUSED WHEN INHALING.

SKIN SENSITIZATION:
GHS: CATEGORY 1

THE ALLERGIC SKIN REACTION MIGHT BE CAUSED.

GERMLINE MUTAGENICITY:
GHS: IT IS NOT POSSIBLE TO CLASSIFY IT DUE TO DATA DEFICIENCY.

CARCINOGENICITY:

GHS: CATEGORY 2

ACGIH: (METAL) A5 - NOT SUSPECTED AS A HUMAN CARCINOGEN

ACGIH:
(WATER-SOLUBLE COMPOUNDS) A4 - NOT CLASSIFIED AS A HUMAN CARCINOGEN OBVIOUSLY

ACGIH: (INSOLUBLE COMPOUNDS) A1 - CONFIRMED HUMAN CARCINOGEN

NIOSH: POTENTIAL OCCUPATIONAL CARCINOGEN

NTP: REASONABLY ANTICIPATED TO BE HUMAN CARCINOGEN

IARC: (METAL) GROUP 2B POSSIBLY CARCINOGENIC TO HUMAN

IARC: (COMPOUNDS) GROUP 1 CARCINOGENIC TO HUMAN

REPRODUCTION TOXICITY:
GHS: IT IS NOT POSSIBLE TO CLASSIFY IT DUE TO DATA DEFICIENCY.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (SINGLE EXPOSURE):
GHS: CATEGORY 1(RESPIRATORY ORGAN AND KIDNEY).
THE DISORDER OF THE RESPIRATORY ORGAN AND THE KIDNEY IS CAUSED.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (REPEATED EXPOSURE):
GHS: CATEGORY 1(RESPIRATORY ORGAN).

THE DISORDER OF THE RESPIRATORY ORGAN IS CAUSED BY LONG-TERM OR REPEATED EXPOSURE.

CADMIUM, CADMIUM COMPOUNDS:

ACUTE TOXICITY:
ORAL:
GHS: CATEGORY 4 (SWALLOWING IS HARMFUL.)

SKIN: UNKNOWN.

INHALATION (DUST):
GHS: CATEGORY 1 (IT IS DANGEROUS IN THE LIFE WHEN INHALING.)

SKIN CORROSIVITY: UNKNOWN.

SERIOUS DAMAGE AND IRRITANT PROPERTY FOR EYES: UNKNOWN.

RESPIRATORY OR SKIN SENSITIZATION: UNKNOWN.

GERMLINE MUTAGENICITY:
GHS: CATEGORY 2
THE HEREDITARY DISORDER MIGHT BE CAUSED.

CARCINOGENICITY:
GHS: CATEGORY 1A
ACGIH: A2 - SUSPECTED HUMAN CARCINOGEN
NIOSH: POTENTIAL OCCUPATIONAL CARCINOGEN
NTP: KNOWN TO BE A HUMAN CARCINOGEN
IARC: GROUP 1 CARCINOGENIC TO HUMAN

REPRODUCTION TOXICITY:
GHS: CATEGORY 2
HARMFUL EFFECTS ON REPRODUCTIVE CAPACITY OR FETUS MIGHT BE EXERTED.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (SINGLE EXPOSURE):
GHS: CATEGORY 1
DAMAGE OF LUNGS AND THE RESPIRATORY ORGAN IS CAUSED.
OVEREXPOSURE CAUSES THE PULMONARY DISORDER.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (REPEATED EXPOSURE):
GHS: CATEGORY 1

THE DISORDER OF THE KIDNEY, LUNGS, BLOOD, BONE, AND RESPIRATORY ORGAN IS CAUSED BY LONG-TERM OR REPEATED EXPOSURE.

COBALT, COBALT COMPOUNDS:

ACUTE TOXICITY:

ORAL:
GHS: OUT OF CATEGORY.

SKIN: UNKNOWN.

INHALATION (GAS):

GHS: EXEMPT FROM A CLASSIFICATION.

INHALATION (STEAM): UNKNOWN.

INHALATION (MIST):
GHS: IT IS NOT POSSIBLE TO CLASSIFY IT DUE TO DATA DEFICIENCY.

SKIN CORROSIVITY: UNKNOWN.

SERIOUS DAMAGE AND IRRITANT PROPERTY FOR EYES: UNKNOWN.

RESPIRATORY OR SKIN SENSITIZATION:
RESPIRATORY SENSITIZATION:
GHS: CATEGORY 1

THE ALLERGY, ASTHMA OR BREATHING DIFFICULTIES MIGHT BE CAUSED WHEN INHALING.

SKIN SENSITIZATION:
GHS: CATEGORY 1
THE ALLERGIC SKIN REACTION MIGHT BE CAUSED.

GERMLINE MUTAGENICITY: UNKNOWN.

CARCINOGENICITY:
GHS: CATEGORY 2

ACGIH:
A3 - CONFIRMED ANIMAL CARCINOGEN BUT RELEVANCE TO HUMAN CARCINOGEN IS UNKNOWN.

IARC: GROUP 2B POSSIBLY CARCINOGENIC TO HUMAN.

THE CANCER MIGHT BE CAUSED.

REPRODUCTION TOXICITY:
GHS: CATEGORY 2.
THE ADVERSE EFFECT ON REPRODUCTIVE COMPETENCE OR THE FETUS MIGHT OCCUR.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (SINGLE EXPOSURE):
GHS: CATEGORY 3(RESPIRATORY TRACT IRRITATING PROPERTIES).
THE RESPIRATORY ORGAN MIGHT BE STIMULATED.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (REPEATED EXPOSURE):
GHS: CATEGORY 1(RESPIRATORY ORGAN).

THE DISORDER OF THE RESPIRATORY ORGAN IS CAUSED BY LONG-TERM OR REPEATED EXPOSURE.

CARBON BLACK:

ACUTE TOXICITY:

ORAL:
RAT LD50: 15400 MG/KG

SKIN: UNKNOWN.

INHALATION (DUST): UNKNOWN.

SKIN CORROSIVITY: UNKNOWN.

SERIOUS DAMAGE AND IRRITANT PROPERTY FOR EYES: UNKNOWN.

RESPIRATORY OR SKIN SENSITIZATION:
RESPIRATORY SENSITIZATION: UNKNOWN.
SKIN SENSITIZATION: UNKNOWN.

GERMLINE MUTAGENICITY: UNKNOWN.

CARCINOGENICITY:
GHS: CATEGORY 2

ACGIH:
A3 - CONFIRMED ANIMAL CARCINOGEN BUT RELEVANCE TO HUMAN CARCINOGEN IS UNKNOWN.

IARC: GROUP 2B POSSIBLY CARCINOGENIC TO HUMAN.

THE CANCER MIGHT BE CAUSED.

REPRODUCTION TOXICITY: UNKNOWN.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (SINGLE EXPOSURE): UNKNOWN.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (REPEATED EXPOSURE):
GHS: CATEGORY 1

THE DISORDER OF THE PULMONARY IS CAUSED BY LONG-TERM OR REPEATED INHALATION EXPOSURE.

POTASSIUM HYDROXIDE:

ACUTE TOXICITY:
ORAL:
GHS: CATEGORY 3. HARMFUL IF SWALLOWED.

SKIN:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

INHALATION (STEAM):
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

INHALATION (DUST):
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

SKIN CORROSIVITY:
GHS: CATEGORY 1B.
SERIOUS CHEMICAL WOUND OF THE SKIN AND DAMAGE OF EYES IS CAUSED.

SERIOUS DAMAGE AND IRRITANT PROPERTY FOR EYES:
GHS: CATEGORY 1.

RESPIRATORY OR SKIN SENSITIZATION:

RESPIRATORY SENSITIZATION:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

SKIN SENSITIZATION:
GHS: OUT OF CATEGORY.

GERMLINE MUTAGENICITY:
GHS: OUT OF CATEGORY.

CARCINOGENICITY:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

REPRODUCTION TOXICITY:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (SINGLE EXPOSURE):
GHS: CATEGORY 1.
THE DISORDER OF THE RESPIRATORY SYSTEM IS CAUSED.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (REPEATED EXPOSURE):
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

SODIUM HYDROXIDE:

ACUTE TOXICITY:

ORAL:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

SKIN:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

INHALATION (GAS):
GHS: OUT OF CATEGORY.
INHALATION (STEAM): UNKNOWN.
INHALATION (DUST): UNKNOWN.

SKIN CORROSIVITY:
GHS: CATEGORY 1.
SERIOUS CHEMICAL WOUND OF THE SKIN AND DAMAGE OF EYES IS CAUSED.

SERIOUS DAMAGE AND IRRITANT PROPERTY FOR EYES:
GHS: CATEGORY 1.
SERIOUS DAMAGE OF EYES IS CAUSED.

RESPIRATORY OR SKIN SENSITIZATION:

RESPIRATORY SENSITIZATION:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

SKIN SENSITIZATION:
GHS: OUT OF CATEGORY.

GERMLINE MUTAGENICITY:
GHS: OUT OF CATEGORY

CARCINOGENICITY:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

REPRODUCTION TOXICITY:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (SINGLE EXPOSURE):
GHS: CATEGORY 1(RESPIRATORY SYSTEM).
THE DISORDER OF THE RESPIRATORY ORGAN IS CAUSED.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (REPEATED EXPOSURE):
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

LITHIUM HYDROXIDE:

ACUTE TOXICITY:

ORAL:
GHS: CATEGORY 3. HARMFUL IF SWALLOWED.

SKIN: UNKNOWN.

INHALATION (STEAM): UNKNOWN.

INHALATION (DUST):
GHS: CATEGORY 3. HARMFUL IF INHALED.

SKIN CORROSIVITY:
GHS: CATEGORY 1.
SERIOUS CHEMICAL WOUND OF THE SKIN AND DAMAGE OF EYES IS CAUSED.

SERIOUS DAMAGE AND IRRITANT PROPERTY FOR EYES:
GHS: CATEGORY 1.

RESPIRATORY OR SKIN SENSITIZATION:

RESPIRATORY SENSITIZATION:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

SKIN SENSITIZATION:
GHS: IT IS NOT POSSIBLE TO CLASSIFY.

GERMLINE MUTAGENICITY: UNKNOWN.

CARCINOGENICITY: UNKNOWN.

REPRODUCTION TOXICITY: UNKNOWN.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (SINGLE EXPOSURE):
GHS: CATEGORY 1.
THE DISORDER OF THE RESPIRATORY SYSTEM IS CAUSED BY INHALATION EXPOSURE.

CERTAIN TARGET ORGAN/SYSTEMIC TOXICITY (REPEATED EXPOSURE):
GHS: CATEGORY 1&2.

THE DISORDER OF THE RESPIRATORY SYSTEM IS CAUSED BY LONG-TERM OR REPEATED INHALATION EXPOSURE. THE DISORDER OF THE LIVER AND THE HEMATOPOIETIC SYSTEM BY LONG-TERM OR REPEATED ORAL EXPOSURE MIGHT BE CAUSED.

12. ECOLOGICAL INFORMATION

PERSISTENCE/DEGRADABILITY:
SINCE A BATTERY CELL AND THE INTERNAL MATERIALS REMAIN IN THE ENVIRONMENT, DO NOT BURY OR THROW OUT INTO THE ENVIRONMENT.

BIOACCUMULATION:
CADMIUM BIOACCUMULATION OCCURS IN PLANTS AND MARINE FOOD IN HUMAN FOOD CHAIN.

13. DISPOSAL CONSIDERATIONS

RECOMMENDED METHODS FOR SAFE AND ENVIRONMENTALLY PREFERRED DISPOSAL:

PRODUCT (WASTE FROM RESIDUES):
DO NOT THROW OUT A USED BATTERY CELL. RECYCLE IT THROUGH THE RECYCLING COMPANY.

CONTAMINATED PACKAGING:
NEITHER A CONTAINER NOR PACKING IS CONTAMINATED DURING NORMAL USE. WHEN INTERNAL MATERIALS LEAKED FROM A BATTERY CELL CONTAMINATES THEM, DISPOSE THEM AS INDUSTRIAL WASTES SUBJECT TO SPECIAL CONTROL.

14. TRANSPORT INFORMATION

THIS BATTERY DOESN'T CORRESPOND TO DANGEROUS ARTICLE OF THE UNITED NATIONS TRANSPORTATION REGULATIONS. MOREOVER, THIS ARTICLE DOESN'T CORRESPOND TO DANGEROUS ARTICLE TO WHICH TRANSPORTATION IS RESTRICTED BY THE FOLLOWING DECREE AND GUIDELINE.

TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR (ICAO)

IATA DANGEROUS GOODS REGULATIONS (IATA)

INTERNATIONAL MARITIME DANGEROUS GOODS CODE (IMO)

CODE OF FEDERAL REGULATIONS (U.S.DOT):
HOWEVER, IT IS NECESSARY TO OBEY THE IATA DANGEROUS GOODS REGULATIONS (A123).

IN THE CASE OF TRANSPORTATION, CONFIRM NO LEAKAGE AND NO SPILLAGE FROM A CONTAINER. TAKE IN A CARGO OF THEM WITHOUT FALLING, DROPPING AND BREAKAGE. PREVENT COLLAPSE OF CARGO PILES AND WET BY RAIN. THE CONTAINER MUST BE HANDLED CAREFULLY. DO NOT GIVE SHOCKS THAT RESULT IN A MARK OF HITTING ON A CELL. MOREOVER, TAKE THE PROTECTION MEASURES NOT SHORT-CIRCUITED. PLEASE REFER TO SECTION 7-HANDLING AND STORAGE ALSO.

15. REGULATORY INFORMATION

REGULATIONS SPECIFICALLY APPLICABLE TO THE PRODUCT:
WASTES MANAGEMENT AND PUBLIC CLEANING LAW (JAPAN)
LAW FOR PROMOTION EFFECTIVE UTILIZATION OF RESOURCES (JAPAN)
MERCURY-CONTAINING AND RECHARGEABLE BATTERY MANAGEMENT ACT (USA)
COMMISSION DIRECTIVE 2006/66/EC (EU)

16. OTHER INFORMATION

THE INFORMATION CONTAINED IN THIS SAFETY DATA SHEET IS BASED ON THE PRESENT STATE OF KNOWLEDGE AND CURRENT LEGISLATION.

THIS SAFETY DATA SHEET PROVIDES GUIDANCE ON HEALTH, SAFETY AND ENVIRONMENTAL ASPECTS OF THE PRODUCT AND SHOULD NOT BE CONSTRUED AS ANY GUARANTEE OF TECHNICAL PERFORMANCE OR SUITABILITY FOR PARTICULAR APPLICATIONS.

REFERENCE:

CHEMICAL SUBSTANCES INFORMATION:
JAPAN ADVANCED INFORMATION CENTER OF SAFETY AND HEALTH

INTERNATIONAL CHEMICAL SAFETY CARDS (ICSCS):
INTERNATIONAL OCCUPATIONAL SAFETY AND HEALTH INFORMATION CENTER (CIS)

2010 TLVS AND BEIS:
AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

NIOSH CARCINOGEN LIST:
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

THE NINTH REPORT ON CARCINOGEN: NATIONAL TOXICOLOGY PROGRAM (NTP)

IARC MONOGRAPHS PROGRAM ON THE EVALUATION OF CARCINOGENIC RISKS TO HUMANS:
INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC)

GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS (GHS)

NATIONAL INSTITUTE OF TECHNOLOGY AND EVALUATION (NITE)

FIRST EDITION: DEC. 1, 2003

LATEST EDITION: FEB. 10, 2011

PREPARED AND APPROVED BY:
SANYO ELECTRIC CO., LTD.
MOBILE ENERGY COMPANY
CADNICA BATTERY DIVISION
ENGINEERING DEPARTMENT

ITEM: 2AEU6 - Cordless Drill/Driver Kit 18.0V 1/

MSDS: S0644 **ORDER: 0122785584** **LP NUMBER: U843436638**

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - S0644

Associated Grainger Items
1GEB6, 1VK69, 2AEU6, 2AEU7, 2AEU8, 2AEU9, 2AEV3, 2VDJ2, 3HFV8, 3HFV9, 3HFX7
3HFX9, 3KA76, 3LA75, 3WY80, 4BU70, 4GA68, 4GA69, 6RM75, 6RM76, 1AUZ2, 1AUZ3
1AUZ4, 1EC28, 1EC29, 1EC30, 1EC31, 1EC32, 1EZ37, 1EZ38, 1EZ39, 1GEA4, 1GEA5
1GEA6, 1GEA7, 1GEA8, 1GEA9, 1GEB1, 1GEB2, 1GEB3, 1GEB4, 1GEB5, 1GEB7, 1GEB8
1GEB9, 1GEC1, 1GEC2, 1GEC3, 1GEC4, 1GEC5, 1GEC6, 1GEC7, 1GEC8, 1GEC9, 1GED1
1GED4, 1MEW4, 1MEW5, 1MEW6, 1PJK8, 1PX99, 1PZ10, 1PZ11, 1PZ12, 1PZ14, 1PZ15
1PZ16, 1PZ17, 1PZ18, 1PZ19, 1PZ20, 1PZ21, 1PZ22, 1PZ23, 1PZ24, 1PZ25, 1PZ26
1PZ27, 1PZ28, 1RD18, 1RD19, 1WXL9, 1WXN1, 1WXN2, 1XGN4, 1XGN5, 2AEU4, 2AEV1
2AEV4, 2AEV5, 2AEV7, 2AEV8, 2AEV9, 2AEW1, 2AEW2, 2AEW3, 2HNX5, 2HNX6, 2NY21
2NY22, 2NY24, 2NY25, 2RDZ5, 2VDJ3, 2VDJ4, 2VDJ9, 2VDK6, 2XY55, 2XY56, 2XY57
2XY62, 2XY63, 2XY64, 2XY65, 3AB13, 3AB14, 3CRK8, 3EB89, 3EB90, 3EME5, 3FRN3
3HFV7, 3HFW1, 3HFW2, 3HFW3, 3HFW4, 3HFW5, 3HFW6, 3HFW7, 3HFW8, 3HFW9, 3HFX1
3HFX2, 3HFX3, 3HFX4, 3HFX5, 3HFX6, 3HFX8, 3HFY1, 3HFY2, 3HFY3, 3KA75, 3KA77
3KA78, 3KA79, 3KA80, 3LA56, 3LA57, 3LA58, 3LA76, 3MJ64, 3MY90, 3PA28, 3WE97
3WE98, 48645, 4EB26, 4EB27, 4EB28, 4EB29, 4EB30, 4EB31, 4EB32, 4EB33, 4EB34
4EB35, 4EB36, 4EB37, 4EB38, 4EB39, 4EB40, 4EB41, 4EB42, 4EB43, 4EB86, 4EB87
4EB88, 4EB89, 4GA70, 4GA75, 4GA76, 4GA77, 4GA79, 4GA80, 4GD32, 4GD74, 4JB70
4JB71, 4JB76, 4JB81, 4JB82, 4JB83, 4JB84, 4LEX4, 4LF47, 4LF48, 4NLP5, 4NLP6
4NLP7, 4NLP8, 4NLP9, 4NLR1, 4NLR2, 4NLR3, 4VW99, 4VX20, 4VX21, 4WL38, 4YB73
4YB77, 4YK29, 4YK30, 4YK32, 4YK33, 4YL20, 4YL22, 4YL23, 4YL24, 4YL25, 4YL26
5A190, 5MP39, 5MP74, 5MP77, 5MP80, 5MP81, 5MP82, 5MP83, 5MP84, 5MP85, 5MP86
5RHP1, 5ZM44, 5ZM45, 6004515, 6042941, 6250817, 6272271, 6275051, 6347248
6354270, 6354542, 6361591, 6GD51, 6GD52, 6HD91, 6RM72, 6RM73, 6RM74, 6RM77
6RM78, 6RM79, 6XG84, 6XG85, 6XJ68, 7AH22, 7AH26, 7YR35, 7YR36, 7YR37, 7YR38
7YR39, 7YR40, 7YR41, 9GPP1, 9GPP2, 9TM35, 4VX35

NOMBRE COMERCIAL: BATERIAS DE NIQUEL-CADMIO

FABRICANTE: SANYO ELECTRIC JAPAN

FECHA DE REVISIËN DE LA HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO: 3/1/2006

NÚMERO(S) DE ART=CULO DE GRAINGER:
1GEB6, 1VK69, 2AEU6, 2AEU7, 2AEU8, 2AEU9, 2AEV3, 2VDJ2, 3HFV8, 3HFV9,
3HFX7, 3HFX9, 3KA76, 3LA75, 3WY80, 4BU70, 4GA68, 4GA69, 6RM75, 6RM76,
1AUZ2, 1AUZ3, 1AUZ4, 1EC28, 1EC29, 1EC30, 1EC31, 1EC32, 1EZ37, 1EZ38,
1EZ39, 1GEA4, 1GEA5, 1GEA6, 1GEA7, 1GEA8, 1GEA9, 1GEB1, 1GEB2, 1GEB3,
1GEB4, 1GEB5, 1GEB7, 1GEB8, 1GEB9, 1GEC1, 1GEC2, 1GEC3, 1GEC4, 1GEC5,
1GEC6, 1GEC7, 1GEC8, 1GEC9, 1GED1, 1GED4, 1MEW4, 1MEW5, 1MEW6, 1PJK8,
1PX99, 1PZ10, 1PZ11, 1PZ12, 1PZ14, 1PZ15, 1PZ16, 1PZ17, 1PZ18, 1PZ19,
1PZ20, 1PZ21, 1PZ22, 1PZ23, 1PZ24, 1PZ25, 1PZ26, 1PZ27, 1PZ28, 1RD18,
1RD19, 1WXL9, 1WXN1, 1WXN2, 1XGN4, 1XGN5, 2AEU4, 2AEV1, 2AEV4, 2AEV5,
2AEV7, 2AEV8, 2AEV9, 2AEW1, 2AEW2, 2AEW3, 2HNX5, 2HNX6, 2NY21, 2NY22,
2NY24, 2NY25, 2RDZ5, 2VDJ3, 2VDJ4, 2VDJ9, 2VDK6, 2XY55, 2XY56, 2XY57,
2XY62, 2XY63, 2XY64, 2XY65, 3AB13, 3AB14, 3CRK8, 3EB89, 3EB90, 3EME5,
3FRN3, 3HFV7, 3HFW1, 3HFW2, 3HFW3, 3HFW4, 3HFW5, 3HFW6, 3HFW7, 3HFW8,
3HFW9, 3HFX1, 3HFX2, 3HFX3, 3HFX4, 3HFX5, 3HFX6, 3HFX8, 3HFY1, 3HFY2,
3HFY3, 3KA75, 3KA77, 3KA78, 3KA79, 3KA80, 3LA56, 3LA57, 3LA58, 3LA76,
3MJ64, 3MY90, 3PA28, 3WE97, 3WE98, 48645, 4EB26, 4EB27, 4EB28, 4EB29,
4EB30, 4EB31, 4EB32, 4EB33, 4EB34, 4EB35, 4EB36, 4EB37, 4EB38, 4EB39,
4EB40, 4EB41, 4EB42, 4EB43, 4EB86, 4EB87, 4EB88, 4EB89, 4GA70, 4GA75,
4GA76, 4GA77, 4GA79, 4GA80, 4GD32, 4GD74, 4JB70, 4JB71, 4JB76, 4JB81,
4JB82, 4JB83, 4JB84, 4LEX4, 4LF47, 4LF48, 4NLP5, 4NLP6, 4NLP7, 4NLP8,
4NLP9, 4NLR1, 4NLR2, 4NLR3, 4VW99, 4VX20, 4VX21, 4WL38, 4YB73, 4YB77,
4YK29, 4YK30, 4YK32, 4YK33, 4YL20, 4YL22, 4YL23, 4YL24, 4YL25, 4YL26,
5A190, 5MP39, 5MP74, 5MP77, 5MP80, 5MP81, 5MP82, 5MP83, 5MP84, 5MP85,
5MP86, 5RHP1, 5ZM44, 5ZM45, 6004515, 6042941, 6250817, 6272271, 6275051,
6347248, 6354270, 6354542, 6361591, 6GD51, 6GD52, 6HD91, 6RM72, 6RM73,
6RM74, 6RM77, 6RM78, 6RM79, 6XG84, 6XG85, 6XJ68, 7AH22, 7AH26, 7YR35,
7YR36, 7YR37, 7YR38, 7YR39, 7YR40, 7YR41, 9GPP1, 9GPP2, 9TM35, 4VX35

NÚMERO(S) DE MODELO DEL FABRICANTE:

HOJA DE DATOS E INFORMACION DEL PRODUCTO

ESTE PRODUCTO ES UN ARTICULO MANUFACTURADO SEGUN SE DESCRIBE EN EL CODIGO 29 CFR 1910.1200 Y NO ESTA SUJETO A LA NORMA DE COMUNICACION DE RIESGOS DE LA OSHA PARA LA PREPARACION DE HOJAS DE DATOS DE SEGURIDAD DEL PRODUCTO (MSDS).

BATERIAS SANYO
SANYO ENERGY (USA) CORP.
2055 SANYO AVE.
SAN DIEGO, CA 92154

TELEFONO: (619) 661-4888

WWW.SANYOBATTERIES.COM

NOMBRE DEL FABRICANTE:
SANYO ELECTRIC CO., LTD.
TOKONAPE-CHO KASAI-CITY
HYOGO, 675-2332
JAPAN

TELEFONO: 0790-43-2043

EN CASO DE EMERGENCIA, PONGASE EN CONTACTO CON:
CHEMTREC: (800) 424-9300

SECCION I: INFORMACION DEL PRODUCTO

PRODUCTO: BATERIA DE NIQUEL-CADMIO

¿DESIGNADA PARA RECARGA?:
(X) SI
( ) NO

NOMBRE COMERCIAL: CADNICA

SISTEMA QUIMICO: NIQUEL-CADMIO

VOLTAJE NOMINAL: 1.2V

SECCION II: COMPOSICION/INFORMACION DE INGREDIENTES

LOS INGREDIENTES ESTAN CONTENIDOS EN UNA CARCASA HERMETICAMENTE SELLADA, MISMA QUE ESTA DISEÑADA PARA RESISTIR LAS TEMPERATURAS Y PRESIONES CORRESPONDIENTES A UN USO NORMAL. COMO RESULTADO DE ELLO, LOS MATERIALES PELIGROSOS ESTAN TOTALMENTE CONTENIDOS DENTRO DE LA BATERIA DURANTE SU USO NORMAL. NO ABRA LA BATERIA NI LA EXPONGA AL CALOR, YA QUE LA EXPOSICION A LOS SIGUIENTES INGREDIENTES CONTENIDOS EN LA BATERIA PODRIA SER DAÑINA EN CIERTOS CASOS. LA SIGUIENTE INFORMACION SE PROVEE PARA INFORMACION DEL USUARIO UNICAMENTE.

NOMBRE QUIMICO	# CAS	%(1)	LEP (PEL)	UVU (TLV)
CADMIO	7440-43-9	11-26	0.005 TWA (PTP) (2)	0.05 TWA (PTP)
HIDROXIDO DE CADMIO	21041-95-2	11-26	0.005 TWA (PTP)	0.05 TWA (PTP)
NIQUEL (POLVO)	7440-02-0	8-17	1 TWA (PTP)	1 TWA (PTP)
HIDROXIDO DE NIQUEL	12054-48-7	5-12	1 TWA (PTP)	1 TWA (PTP)
HIDROXIDO DE POTASIO	1310-58-3	<3	2 TOPE	2 TOPE
NYLON	N/A	<2	N/A	N/A
ACERO	N/A	12-13	N/A	N/A
OTRO	N/A	<1	N/A	N/A
TOTAL		100		

NOTAS:
(1). LAS CONCENTRACIONES VARIAN DEPENDIENDO DEL ESTADO DE CARGA O DESCARGA.

(2). PTP ES LA CONCENTRACION EN PROMEDIO DE TIEMPO PONDERADO DURANTE UN PERIODO DE 8 HORAS.

SECCION III: DATOS FISICOS

CADMIO:

PUNTO DE FUSION (GRADOS F): 610

PUNTO DE EBULLICION (GRADOS F): 1,407

% VOLATILES POR VOLUMEN:

PRESION DE VAPOR (MMHg):

VELOCIDAD DE EVAPORACION:

DENSIDAD DE VAPOR (AIRE = 1):

GRAVEDAD ESPECIFICA (H2O): 8.65 @ 77 GRADOS F

SOLUBILIDAD EN AGUA: INSOLUBLE

ASPECTO Y OLOR: METAL LUSTROSO, PLATA-BLANCO, TINTE AZUL

GRAVEDAD ESPECIFICA DE ELECTROLITOS: 1.29 G/CM3

VISCOCIDAD DE ELECTROLITOS: 2.4 MPAS

(*MPAS: MILI-PASCAL POR SEGUNDO)

HIDROXIDO DE CADMIO:

PUNTO DE FUSION (GRADOS F):

PUNTO DE EBULLICION (GRADOS C):

% VOLATILES POR VOLUMEN:

PRESION DE VAPOR (MMHg):

VELOCIDAD DE EVAPORACION:

DENSIDAD DE VAPOR (AIRE = 1):

GRAVEDAD ESPECIFICA (H2O): 4.79

SOLUBILIDAD EN AGUA: PRACTICAMENTE INSOLUBLE

ASPECTO Y OLOR: POLVO

POLVO DE NIQUEL:

PUNTO DE FUSION (GRADOS F): 2,831

PUNTO DE EBULLICION (GRADOS F): 5,134

% VOLATILES POR VOLUMEN:

PRESION DE VAPOR (MMHg):

VELOCIDAD DE EVAPORACION:

DENSIDAD DE VAPOR (AIRE = 1):

GRAVEDAD ESPECIFICA (H2O): 8.90

SOLUBILIDAD EN AGUA: INSOLUBLE

ASPECTO Y OLOR: POLVO

HIDROXIDO DE NIQUEL:

PUNTO DE FUSION (GRADOS F): *

PUNTO DE EBULLICION (GRADOS F):

% VOLATILES POR VOLUMEN:

PRESION DE VAPOR (MMHg):

VELOCIDAD DE EVAPORACION:

DENSIDAD DE VAPOR (AIRE = 1):

GRAVEDAD ESPECIFICA (H2O):

SOLUBILIDAD EN AGUA: INSOLUBLE

ASPECTO Y OLOR: POLVO, VERDE MANZANA

* NOTA: SE DESCOMPONE A MAS DE 392 GRADOS F EN NIO Y H2O.

HIDROXIDO DE POTASIO:

PUNTO DE FUSION (GRADOS F): *

PUNTO DE EBULLICION (GRADOS F):

% VOLATILES POR VOLUMEN:

PRESION DE VAPOR (MMHg):

VELOCIDAD DE EVAPORACION:

DENSIDAD DE VAPOR (AIRE = 1):

GRAVEDAD ESPECIFICA (H2O):

SOLUBILIDAD EN AGUA:
SOLUBLE EN 0.9 PARTES DE AGUA, 0.6 PARTES EN AGUA HIRVIENDO

ASPECTO Y OLOR: BLANCO O LIGERAMENTE AMARILLO

* NOTA:
EL HIDROXIDO DE POTASIO ESTA PRESENTE EN FORMA DE LIQUIDO O PASTA Y FUNCIONA COMO EL ELECTROLITO EN LA CELDA DE LA BATERIA.

SECCION IV: RIESGOS DE INCENDIO Y EXPLOSION

PUNTO DE INFLAMACION: NA

LIMITE INFERIOR DE EXPLOSION: NA
LIMITE SUPERIOR DE EXPLOSION: NA

MEDIOS DE EXTINCION:
ES POSIBLE UTILIZAR CUALQUIER TIPO DE MEDIO DE EXTINCION EN LAS BATERIAS O SU EMPAQUE.

PROCEDIMIENTOS ESPECIALES PARA APAGAR EL INCENDIO:
LA EXPOSICION A TEMPERATURA DE MAS DE 212 GRADOS F PUEDE CAUSAR LA EVAPORACION DEL CONTENIDO LIQUIDO DEL ELECTROLITO DE HIDROXIDO DE POTASIO, LO QUE RESULTARIA EN LA ROTURA DE LA CELDA. EXISTE LA POSIBILIDAD DE UNA EXPOSICION A LAS EMANACIONES DE CADMIO DURANTE UN INCENDIO; UTILICE UN APARATO RESPIRATORIO AUTONOMO.

SECCION V: RIESGOS A LA SALUD

LIMITES DE VALOR UMBRAL: VER SECCION II

EFECTOS DE UNA SOBREEXPOSICION (AGUDA):

INHALACION:
ES POCO PROBABLE QUE OCURRA UNA INHALACION DURANTE EL USO NORMAL DE LAS BATERIAS, DEBIDO A LA CONTENCION DE LOS MATERIALES PELIGROSOS DENTRO DE LA CARCASA DE LA BATERIA. SIN EMBARGO, SI LAS BATERIAS SE EXPONEN AL CALOR EXTREMO O A PRESIONES QUE CAUSEN LA RUPTURA DE LA CARCASA, ES POSIBLE QUE OCURRA UNA EXPOSICION A LOS COMPONTENTES. LA INHALACION DE POLVOS DE COBALTO PUEDE RESULTAR EN PADECIMIENTOS PULMONARES.

INGESTION:
SI LA BATERIA SE ABRE DENTRO DE LAS VIAS DIGESTIVAS, EL ELECTROLITO PUEDE CAUSAR QUEMADURAS.

ABSORCION A TRAVES DE LA PIEL:
NO SE CUENTA CON EVIDENCIAS DE EFECTOS ADVERSOS SEGUN LOS DATOS DISPONIBLES.

CONTACTO CON LA PIEL:
LA EXPOSICION AL ELECTROLITO CONTENIDO DENTRO DE LA BATERIA PUDIERA RESULTAR EN QUEMADURAS QUIMICAS. LA EXPOSICION AL NIQUEL PUEDE CAUSAR DERMATITIS EN ALGUNAS PERSONAS SENSIBLES.

CONTACTO CON LOS OJOS:
LA EXPOSICION AL ELECTROLITO CONTENIDO DENTRO DE LA BATERIA PUDIERA RESULTAR EN IRRITACION SEVERA Y QUEMADURAS QUIMICAS.

CARCINOGENESIS:
EL NIQUEL HA SIDO IDENTIFICADO POR EL PROGRAMA TOXICOLOGICO NACIONAL (NTP) COMO UN PROBABLE CARCINOGENO. EL COBALTO HA SIDO IDENTIFICADO POR LA IARC COMO UN CARCINOGENO 2B.

OTROS EFECTOS DE UNA EXPOSICION REPETIDA (CRONICA):
LA SOBREEXPOSICION CRONICA AL NIQUEL PUEDE RESULTAR EN CANCER; EL CONTACTO CON LA PIEL PUEDE RESULTAR EN DERMATITIS EN PERSONAS SENSIBLES.

PADECIMIENTOS MEDICOS QUE PUDIERAN AGRAVARSE POR LA SOBREEXPOSICION:
CONSIDERANDO LA INFORMACION TOXICOLOGICA DISPONIBLE Y LAS PROPIEDADES FISICAS Y QUIMICAS DEL PRODUCTO, ES POCO PROBABLE QUE LA SOBREEXPOSICION AGRAVE LOS PADECIMIENTOS MEDICOS EXISTENTES.

PROCEDIMIENTOS DE EMERGENCIA Y PRIMEROS AUXILIOS:

INGESTION: NO INDUZCA EL VOMITO. OBTENGA ATENCION MEDICA DE INMEDIATO.

PIEL:
SI LOS COMPONENTES INTERNOS DE LA CELDA DE UNA BATERIA ABIERTA ENTRAN EN CONTACTO CON LA PIEL, ENJUAGUE DE INMEDIATO CON AGUA DURANTE UN MINIMO DE 15 MINUTOS.

INHALACION:
SI EXISTE UNA POSIBLE EXPOSICION A LAS EMANACIONES O LOS POLVOS, SALGA DE INMEDIATO AL AIRE PURO Y OBTENGA ATENCION MEDICA DE INMEDIATO.

OJOS:
SI EL CONTENIDO DE UNA BATERIA ABIERTA ENTRA EN CONTACTO CON LOS OJOS, ENJUAGUE DE INMEDIATO CON AGUA DE MANERA CONTINUA DURANTE UN MINIMO DE 15 MINUTOS. OBTENGA ATENCION MEDICA.

SECCION VI: REACTIVIDAD

LAS BATERIAS SON ESTABLES BAJO CONDICIONES DE OPERACION NORMALES.

NO SE PRODUCE UNA POLIMERIZACION PELIGROSA.

PRODUCTOS PELIGROSOS RESULTANTES DE LA DESCOMPOSICION:
OXIDOS DE NIQUEL Y CADMIO.

CONDICIONES A EVITAR: CALOR, LLAMAS ABIERTAS, CHISPAS Y HUMEDAD.

INCOMPATIBILIDADES POTENCIALES (MATERIALES CON LOS QUE SE DEBE EVITAR EL CONTACTO):
LAS CELDAS DE LA BATERIA ESTAN CONTENIDAS EN UN CONTENEDOR NO REACTIVO; SIN EMBARGO, SI EL CONTENEDOR SE ABRE, EVITE EL CONTACTO DE LOS COMPONENTES INTERNOS DE LA BATERIA CON ACIDOS, ALDEHIDOS Y COMPUESTOS DE CARBAMATO.

SECCION VII: PROCEDIMIENTOS EN CASO DE DERRAMES Y FUGAS

ES POCO PROBABLE QUE OCURRA UN DERRAME O UNA FUGA, YA QUE LAS CELDAS ESTAN CONTENIDAS EN UNA CARCASA HERMETICAMENTE SELLADA. SI LA CARCASA DE LA BATERIA SE ABRE, UTILICE ROPA PROTECTORA QUE RESISTA LOS MATERIALES CAUSTICOS. ABSORBA O CONTENGA LOS RESIDUOS DEL DERRAME EN UN MATERIAL INTERTE. ELIMINE LOS DESECHOS PELIGROSOS EN CUMPLIMIENTO CON LOS REGLAMENTOS ESTATALES Y FEDERALES APLICABLES. LOS RESIDUOS RESULTANTES DE UN DERRAME PUEDEN CONSIDERARSE COMO D002 (CAUSTICO) Y D006 (CADMIO) SEGUNO LA LEY DE CONSERVACION Y RECUPERACION DE RECURSOS (RCRA). CONSULTE LA SECCION IV PARA CONOCER LOS PROCEDIMIENTOS DE RESPUESTA ANTE EL FUEGO O LAS EXPLOSIONES.

SECCION VIII: MANIPULACION Y USO SEGURO

REQUERIMIENTOS DE VENTILACION: NO SE REQUIERE BAJO UN USO NORMAL.

PROTECCION RESPIRATORIA: NO SE REQUIERE BAJO UN USO NORMAL.

PROTECCION PARA LOS OJOS: NO SE REQUIERE BAJO UN USO NORMAL.

GUANTES: NO SE REQUIERE BAJO UN USO NORMAL.

SECCION IX: PRECAUCIONES DE MANIPULACION Y USO SEGURO

ALMACENAMIENTO:
CONSERVE EN UN SITIO FRESCO Y EVITE LA CONDENSACION EN LAS TERMINALES DE LA BATERIA. LAS TEMPERATURAS ELEVADAS PUEDEN RESULTAR EN UNA MENOR VIDA DE SERVICIO. LAS TEMPERATURAS DE ALMACENAMIENTO OPTIMAS SON ENTRE -31 GRADOS F Y 95 GRADOS F.

CONTENCION MECANICA:
EN CASO DE QUE EXISTA ALGUN REQUERIMIENTO ESPECIAL DE ENCAPSULACION O SELLADO, CONSULTE A UN REPRESENTANTE DE SANYO ENERGY CORP. SOBRE LAS POSIBLES LIMITACIONES Y PRECAUCIONES.

MANEJO:
LOS CORTOS CIRCUITOS ACCIDENTALES ELEVARAN LA TEMPERATURA DE LA BATERIA Y REDUCIRAN SU VIDA DE SERVICIO. ASEGURESE DE EVITAR LOS CORTOS CIRCUITOS PROLONGADOS, YA QUE EL CALOR PUEDE QUEMAR LA PIEL E INCLUSO CAUSAR LA RUPTURA DE LA CARCASA DE LA BATERIA. NO AGITE LAS BATERIAS EMPACADAS EN CONTENEDORES A GRANEL. LAS BANDAS O MESAS CON CUBIERTA DE METAL QUE SE UTILICEN PARA EL ENSAMBLAJE DE LAS BATERIAS EN LOS DISPOSITIVOS PUEDEN CAUSAR UN CORTO CIRCUITO; APLIQUE UN MATERIAL AISLANTE A LA SUPERFICIE DE TRABAJO. SI ES NECESARIO SOLDAR LA CARCASA DE LA BATERIA, CONSULTE A UN REPRESENTANTE DE SANYO ENERGY CORP. PARA CONOCER LAS INDICACIONES A FIN DE EVITAR UN DADO AL SELLO O UN CORTO CIRCUITO EXTERNO.

CARGA:
ESTAS BATERIAS ESTAN DISEÑADAS PARA RECARGARSE. ES INEVITABLE LA PERDIDA DEL VOLTAJE Y DE LA CAPACIDAD DE LAS BATERIAS DEBIDO A UNA AUTO-DESCARGA DURANTE EL ALMACENAMIENTO PROLONGADO. CARGUE LAS BATERIAS ANTES DE UTILIZARLAS. OBSERVE LA VELOCIDAD DE CARGA ESPECIFICADA, YA QUE LAS VELOCIDADES MAYORES PUEDEN CAUSAR UNA ELEVACION EN LA PRESION DEL GAS INTERNO, LO QUE PODRIA RESULTAR EN LA GENERACION DE CALOR DAÑINO O EN LA RUPTURA/VENTILACION DE LA CELDA.

ETIQUETADO:
SI LAS ETIQUETAS DE ADVERTENCIA NORMALES NO ESTAN VISIBLES, ES IMPORTANTE COLOCAR UNA ETIQUETA INDICANDO LO SIGUIENTE:

PRECAUCION:
NO DESECHAR EN EL FUEGO, MEZCLAR CON OTROS TIPOS DE BATERIAS, CARGAR A VELOCIDADES SUPERIORES A LAS ESPECIFICADAS, CONECTAR INDEBIDAMENTE O CAUSAR UN CORTO CIRCUITO. ESTO PODRIA RESULTAR EN UN SOBRECALENTAMIENTO O EN LA EXPLOSION O FUGA DEL CONTENIDO DE LA BATERIA.

SOLDADURA:
SI ES NECESARIO SOLDAR LA CARCASA DE LA BATERIA, CONSULTE A UN REPRESENTANTE DE SANYO ENERGY CORP. PARA CONOCER LAS INDICACIONES A FIN DE EVITAR UN DADO AL SELLO O UN CORTO CIRCUITO EXTERNO.

SECCION X: RECICLAJE Y ELIMINACION

SANYO RECOMIENDA RECICLAR LAS BATERIAS. NUESTRAS BATERIAS DE NIQUEL-CADMIO SON RECICLABLES A TRAVES DEL PROGRAMA CHARGE UP TO RECYCLE! DE LA ORGANIZACION RECHARGEABLE BATTERY RECYCLING CORPORATION (RBRC). PARA OBTENER MAYOR INFORMACION, LLAME AL TELEFONO 1-800-8-BATTERY O VISITE EL SITIO WEB WWW.RBRC.ORG. LAS BATERIAS DE NIQUEL-CADMIO DEBEN MANIPULARSE EN CUMPLIMIENTO CON TODOS LOS REGLAMENTOS Y LAS LEYES ESTATALES Y FEDERALES APLICABLES.

RBRC
NI-CD
RECYCLE
1.800.822.8837

NO INCINERE LAS BATERIAS NI LAS SOMETA A TEMPERATURAS MAYORES A LOS 212 GRADOS F. ESTO PODRIA VAPORIZAR EL ELECTROLITO LIQUIDO Y CAUSAR LA RUPTURA DE LA CELDA. LA INCINERACION PUEDE RESULTAR EN UNA EMISION DE CADMIO.

SECCION XI: TRANSPORTE

LAS BATERIAS DE NIQUEL-CADMIO SELLADAS DE SANYO SE CONSIDERAN COMO BATERIAS DE "CELDA SECA" Y NO ESTAN SUJETAS A LOS REGLAMENTOS SOBRE EL TRANSPORTE DE MATERIALES PELIGROSOS DEL DEPARTAMENTO DE TRANSPORTE DE LOS ESTADOS UNIDOS (DOT), LA ORGANIZACION DE AVIACION CIVIL INTERNACIONAL (ICAO), LA ASOCIACION DE TRANSPORTE AEREO INTERNACIONAL (IATA) O LA ASOCIACION MARITIMA INTERNACIONAL (IMO).

EL UNICO REQUERIMIENTO DEL DOT PARA EL ENVIO DE BATERIAS DE NIQUEL-CADMIO APARECE EN LA DISPOSICION ESPECIAL 130, MISMA QUE ESTABLECE QUE LAS BATERIAS SECAS NO ESTAN SUJETAS A LOS REQUERIMIENTOS DE ESTA SECCION SIEMPRE Y CUANDO ESTEN DEBIDAMENTE EMPACADAS Y VAYAN A TRANSPORTARSE DE MANERA QUE SE EVITE LA GENERACION PELIGROSA DEL CALOR (POR EJEMPLO, MEDIANTE UN AISLAMIENTO EFICAZ EN LAS TERMINALES EXPUESTAS) Y SE PROTEJAN CONTRA LOS CORTOS CIRCUITOS. EXISTE UN REQUERIMIENTO SIMILAR EN EL CODIGO 49 CFR 173.21(C) DEL REGLAMENTO DE MATERIALES PELIGROSOS DEL DEPARTAMENTO DE TRANSPORTE DE LOS ESTADOS UNIDOS.

EL REGLAMENTO SOBRE MATERIALES PELIGROSOS DE LA IATA CONTIENE UN REQUERIMIENTO SIMILAR EN LA DISPOSICION ESPECIAL A123, MISMA QUE ESTABLECE LO SIGUIENTE: "ESTO APLICA A LAS BATERIAS Y LOS MEDIOS DE ALMACENAMIENTO ELECTRICOS QUE NO ESTEN ENLISTADOS EN LA SUBSECCION 4.2 - LISTA DE MATERIALES PELIGROSOS. ALGUNOS EJEMPLOS DE DICHAS BATERIAS SON AQUELLAS DE ALCALI-MANGANESO, ZINC-CARBONO, NIQUEL-HIDRURO METALICO Y NIQUEL-CADMIO. QUEDA PROHIBIDO EL TRANSPORTE DE CUALQUIER BATERIA ELECTRICA O DISPOSITIVO ALIMENTADO POR BATERIAS QUE TENGA EL POTENCIAL DE UNA EVOLUCION PELIGROSA DEL CALOR Y QUE NO ESTE PREPARADO PARA EVITAR UN CORTO CIRCUITO (POR EJEMPLO, EN EL CASO DE LAS BATERIAS, MEDIANTE EL AISLAMIENTO EFICAZ DE LAS TERMINALES EXPUESTAS, O BIEN, EN EL CASO DEL EQUIPO, MEDIANTE LA DESCONEXION DE LA BATERIA Y LA PROTECCION DE LAS TERMINALES EXPUESTAS)".

EL INCUMPLIMIENTO CON ESTOS REQUERIMIENTOS PUEDE RESULTAR EN LA APLICACION DE SANCIONES CIVILES SUSTANCIALES.

LA INFORMACION Y LAS RECOMENDACIONES CONTENIDAS EN ESTE DOCUMENTO SE PROVEEN BAJO UN CRITERIO DE BUENA FE. SE CONSIDERA QUE ESTOS DATOS SON PRECISOS A LA FECHA DE SU PREPARACION. SANYO ENERGY CORP. NO PROVEE GARANTIA ALGUNA, YA SEA EXPRESA O IMPLICITA, CON RESPECTO A ESTA INFORMACION Y RECHAZA CUALQUIER RESPONSABILIDAD DERIVADA DE LA MISMA.

FECHA DE LA ULTIMA REVISION: MARZO 2006

ITEM: 2AEU6 - Cordless Drill/Driver Kit 18.0V 1/

MSDS: S2066 **ORDER: 0122785584** **LP NUMBER: U843436638**

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - S2066

Associated Grainger Items
1AUZ2, 1AUZ3, 1AUZ4, 1EC28, 1EC29, 1EC30, 1EC31, 1EC32, 1EZ37, 1EZ38, 1EZ39
1GEA4, 1GEA5, 1GEA6, 1GEA7, 1GEA8, 1GEA9, 1GEB1, 1GEB2, 1GEB3, 1GEB4, 1GEB5
1GEB6, 1GEB7, 1GEB8, 1GEB9, 1GEC1, 1GEC2, 1GEC3, 1GEC4, 1GEC5, 1GEC6, 1GEC7
1GEC8, 1GEC9, 1GED1, 1GED4, 1MEW4, 1MEW5, 1MEW6, 1PJK8, 1PX99, 1PZ10, 1PZ11
1PZ12, 1PZ14, 1PZ15, 1PZ16, 1PZ17, 1PZ18, 1PZ19, 1PZ20, 1PZ21, 1PZ22, 1PZ23
1PZ24, 1PZ25, 1PZ26, 1PZ27, 1PZ28, 1RD18, 1RD19, 1VK69, 1WXL9, 1WXN1, 1WXN2
1XGN4, 1XGN5, 2AEU4, 2AEU6, 2AEU7, 2AEU8, 2AEU9, 2AEV1, 2AEV3, 2AEV4, 2AEV5
2AEV7, 2AEV8, 2AEV9, 2AEW1, 2AEW2, 2AEW3, 2HNX5, 2HNX6, 2NY21, 2NY22, 2NY24
2NY25, 2RDZ5, 2VDJ2, 2VDJ3, 2VDJ4, 2VDJ9, 2VDK6, 2XY55, 2XY56, 2XY57, 2XY62
2XY63, 2XY64, 2XY65, 3AB13, 3AB14, 3CRK8, 3EB89, 3EB90, 3EME5, 3FRN3, 3HFV7
3HFV8, 3HFV9, 3HFW1, 3HFW2, 3HFW3, 3HFW4, 3HFW5, 3HFW6, 3HFW7, 3HFW8, 3HFW9
3HFX1, 3HFX2, 3HFX3, 3HFX4, 3HFX5, 3HFX6, 3HFX8, 3HFX9, 3HFY1, 3HFY2, 3HFY3
3KA75, 3KA76, 3KA77, 3KA78, 3KA79, 3KA80, 3LA56, 3LA57, 3LA58, 3LA75, 3LA76
3MJ64, 3MY90, 3PA28, 3WE97, 3WE98, 3WY80, 48645, 4BU70, 4EB26, 4ED27, 4EB28
4EB29, 4EB30, 4EB31, 4EB32, 4EB33, 4EB34, 4EB35, 4EB36, 4EB37, 4EB38, 4EB39
4EB40, 4EB41, 4EB42, 4EB43, 4EB86, 4EB87, 4EB88, 4EB89, 4GA68, 4GA69, 4GA70
4GA75, 4GA76, 4GA77, 4GA79, 4GA80, 4GD32, 4GD74, 4JB70, 4JB71, 4JB76, 4JB81
4JB82, 4JB83, 4JB84, 4LEX4, 4LF47, 4LF48, 4NLP5, 4NLP6, 4NLP7, 4NLP8, 4NLP9
4NLR1, 4NLR2, 4NLR3, 4VW99, 4VX20, 4VX21, 4WL38, 4YB73, 4YB77, 4YK29, 4YK30
4YK32, 4YK33, 4YL20, 4YL22, 4YL23, 4YL24, 4YL25, 4YL26, 5A190, 5MP39, 5MP74
5MP77, 5MP80, 5MP81, 5MP82, 5MP83, 5MP84, 5MP85, 5MP86, 5RHP1, 5ZM44, 5ZM45
6004515, 6042941, 6250817, 6272271, 6275051, 6347248, 6354270, 6354542
6361591, 6GD51, 6GD52, 6HD91, 6RM72, 6RM73, 6RM74, 6RM75, 6RM76, 6RM77, 6RM78
6RM79, 6XG84, 6XG85, 6XJ68, 7AH22, 7AH26, 7YR35, 7YR36, 7YR37, 7YR38, 7YR39
7YR40, 7YR41, 9GPP1, 9GPP2, 9TM35

GRAINGER(R*)
FOR THE ONES WHO GET IT DONE

HOJA DE DATOS DE SEGURIDAD

NOMBRE COM┌N: NICKEL CADMIUM BATTERY

FABRICANTE: SANYO ELECTRIC JAPAN

FECHA DE REVISIËN DE LA HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO: 1/3/2006

N┌MERO(S) DE ART=CULO DE GRAINGER:
1AUZ2, 1AUZ3, 1AUZ4, 1EC28, 1EC29, 1EC30, 1EC31, 1EC32, 1EZ37, 1EZ38, 1EZ39, 1GEA4, 1GEA5, 1GEA6, 1GEA7, 1GEA8, 1GEA9, 1GEB1, 1GEB2, 1GEB3, 1GEB4, 1GEB5, 1GEB6, 1GEB7, 1GEB8, 1GEB9, 1GEC1, 1GEC2, 1GEC3, 1GEC4, 1GEC5, 1GEC6, 1GEC7, 1GEC8, 1GEC9, 1GED1, 1GED4, 1MEW4, 1MEW5, 1MEW6, 1PJK8, 1PX99, 1PZ10, 1PZ11, 1PZ12, 1PZ14, 1PZ15, 1PZ16, 1PZ17, 1PZ18, 1PZ19, 1PZ20, 1PZ21, 1PZ22, 1PZ23, 1PZ24, 1PZ25, 1PZ26, 1PZ27, 1PZ28, 1RD18, 1RD19, 1VK69, 1WXL9, 1WXN1, 1WXN2, 1XGN4, 1XGN5, 2AEU4, 2AEU6, 2AEU7, 2AEU8, 2AEU9, 2AEV1, 2AEV3, 2AEV4, 2AEV5, 2AEV7, 2AEV8, 2AEV9, 2AEW1, 2AEW2, 2AEW3, 2HNX5, 2HNX6, 2NY21, 2NY22, 2NY24, 2NY25, 2RDZ5, 2VDJ2, 2VDJ3, 2VDJ4, 2VDJ9, 2VDK6, 2XY55, 2XY56, 2XY57, 2XY62, 2XY63, 2XY64, 2XY65, 3AB13, 3AB14, 3CRK8, 3EB89, 3EB90, 3EME5, 3FRN3, 3HFV7, 3HFV8, 3HFV9, 3HFW1, 3HFW2, 3HFW3, 3HFW4, 3HFW5, 3HFW6, 3HFW7, 3HFW8, 3HFW9, 3HFX1, 3HFX2, 3HFX3, 3HFX4, 3HFX5, 3HFX6, 3HFX8, 3HFX9, 3HFY1, 3HFY2, 3HFY3, 3KA75, 3KA76, 3KA77, 3KA78, 3KA79, 3KA80, 3LA56, 3LA57, 3LA58, 3LA75, 3LA76, 3MJ64, 3MY90, 3PA28, 3WE97, 3WE98, 3WY80, 48645, 4BU70, 4EB26, 4ED27, 4EB28, 4EB29, 4EB30, 4EB31, 4EB32, 4EB33, 4EB34, 4EB35, 4EB36, 4EB37, 4EB38, 4EB39, 4EB40, 4EB41, 4EB42, 4EB43, 4EB86, 4EB87, 4EB88, 4EB89, 4GA68, 4GA69, 4GA70, 4GA75, 4GA76, 4GA77, 4GA79, 4GA80, 4GD32, 4GD74, 4JB70, 4JB71, 4JB76, 4JB81, 4JB82, 4JB83, 4JB84, 4LEX4, 4LF47, 4LF48, 4NLP5, 4NLP6, 4NLP7, 4NLP8, 4NLP9, 4NLR1, 4NLR2, 4NLR3, 4VW99, 4VX20, 4VX21, 4WL38, 4YB73, 4YB77, 4YK29, 4YK30, 4YK32, 4YK33, 4YL20, 4YL22, 4YL23, 4YL24, 4YL25, 4YL26, 5A190, 5MP39, 5MP74, 5MP77, 5MP80, 5MP81, 5MP82, 5MP83, 5MP84, 5MP85, 5MP86, 5RHP1, 5ZM44, 5ZM45, 6004515, 6042941, 6250817, 6272271, 6275051, 6347248, 6354270, 6354542, 6361591, 6GD51, 6GD52, 6HD91, 6RM72, 6RM73, 6RM74, 6RM75, 6RM76, 6RM77, 6RM78, 6RM79, 6XG84, 6XG85, 6XJ68, 7AH22, 7AH26, 7YR35, 7YR36, 7YR37, 7YR38, 7YR39, 7YR40, 7YR41, 9GPP1, 9GPP2, 9TM35

N┌MERO (S) DE MODELO DEL FABRICANTE:

1. IDENTIFICACIËN DE LA COMPAD=A.

NOMBRE DEL PRODUCTO: NICKEL CADMIUM BATTERY

MARCA COMERCIAL: CADNICA

SISTEMA QU=MICO: N=QUEL CADMIO

VOLTAJE NOMINAL: 1.2 V, DISEDADO PARA RECARGA.

CËDIGOS RELACIONADOS GRAINGER:
1AUZ2, 1AUZ3, 1AUZ4, 1EC28, 1EC29, 1EC30, 1EC31, 1EC32, 1EZ37, 1EZ38, 1EZ39, 1GEA4, 1GEA5, 1GEA6, 1GEA7, 1GEA8, 1GEA9, 1GEB1, 1GEB2, 1GEB3, 1GEB4, 1GEB5, 1GEB6, 1GEB7, 1GEB8, 1GEB9, 1GEC1, 1GEC2, 1GEC3, 1GEC4, 1GEC5, 1GEC6, 1GEC7, 1GEC8, 1GEC9, 1GED1, 1GED4, 1MEW4, 1MEW5, 1MEW6, 1PJK8, 1PX99, 1PZ10, 1PZ11, 1PZ12, 1PZ14, 1PZ15, 1PZ16, 1PZ17, 1PZ18, 1PZ19, 1PZ20, 1PZ21, 1PZ22, 1PZ23, 1PZ24, 1PZ25, 1PZ26, 1PZ27, 1PZ28, 1RD18, 1RD19, 1VK69, 1WXL9, 1WXN1, 1WXN2, 1XGN4, 1XGN5, 2AEU4, 2AEU6, 2AEU7, 2AEU8, 2AEU9, 2AEV1, 2AEV3, 2AEV4, 2AEV5, 2AEV7, 2AEV8, 2AEV9, 2AEW1, 2AEW2, 2AEW3, 2HNX5, 2HNX6, 2NY21, 2NY22, 2NY24, 2NY25, 2RDZ5, 2VDJ2, 2VDJ3, 2VDJ4, 2VDJ9, 2VDK6, 2XY55, 2XY56, 2XY57, 2XY62, 2XY63, 2XY64, 2XY65, 3AB13, 3AB14, 3CRK8, 3EB89, 3EB90, 3EME5, 3FRN3, 3HFV7, 3HFV8, 3HFV9, 3HFW1, 3HFW2, 3HFW3, 3HFW4, 3HFW5, 3HFW6, 3HFW7, 3HFW8, 3HFW9, 3HFX1, 3HFX2, 3HFX3, 3HFX4, 3HFX5, 3HFX6, 3HFX8, 3HFX9, 3HFY1, 3HFY2, 3HFY3, 3KA75, 3KA76, 3KA77, 3KA78, 3KA79, 3KA80, 3LA56, 3LA57, 3LA58, 3LA75, 3LA76, 3MJ64, 3MY90, 3PA28, 3WE97, 3WE98, 3WY80, 48645, 4BU70, 4EB26, 4EB27, 4EB28, 4EB29, 4EB30, 4EB31, 4EB32, 4EB33, 4EB34, 4EB35, 4EB36, 4EB37, 4EB38, 4EB39, 4EB40, 4EB41, 4EB42, 4EB43, 4EB86, 4EB87, 4EB88, 4EB89, 4GA68, 4GA69, 4GA70, 4CA75, 4GA76, 4GA77, 4GA79, 4GA80, 4GD32, 4GD74, 4JB70, 4JB71, 4JB76, 4JB81, 4JB82, 4JB83, 4JB84, 4LEX4, 4LF47, 4LF48, 4NLP5, 4NLP6, 4NLP7, 4NLP8, 4NLP9, 4NLR1, 4NLR2, 4NLR3, 4VW99, 4VX20, 4VX21, 4WL38, 4YB73, 4YB77, 4YK29, 4YK30, 4YK32, 4YK33, 4YL20, 4YL22, 4YL23, 4YL24, 4YL25, 4YL26, 5A190, 5MP39, 5MP74, 5MP77, 5MP80, 5MP81, 5MP82, 5MP83, 5MP84, 5MP85, 5MP86, 5RHP1, 5ZM44, 5ZM45, 6004515, 6042941, 6250817, 6272271, 6275051, 6347248, 6354270, 6354542, 6361591, 6GD51, 6GD52, 6HD91, 6RM72, 6RM73, 6RM74, 6RM75, 6RM76, 6RM77, 6RM78, 6RM79, 6XG84, 6XG85, 6XJ68, 7AH22, 7AH26, 7YR35, 7YR36, 7YR37, 7YR38, 7YR39, 7YR40, 7YR41, 9GPP1, 9GPP2, 9TM35

NUMERO DE PRODUCTO:

PROVEEDOR:
SANYO ENERGY (USA) CORP.
2055SANYO AVE.
SAN DIEGO, CA92154

TEL┌FONO: 619 661 4888

FABRICANTE:
SANYO ELECTRIC CO., LTD.
TOKONABE-CHO KASAI-CITY
HYOGO, 675-2332
JAPEN

TEL┌FONO: 0790-43-2043

TEL┌FONO DE EMERGENCIA (CHEMTREC): 800 424 9300

2. COMPOSICIËN / INFORMACIËN SOBRE LOS COMPONENTES

LOS INGREDIENTES EST└N CONTENIDOS EN UN RECIPIENTE HERM┌TICAMENTE SELLADO, DISEDADO PARA SOPORTAR TEMPERATURAS Y PRESIONES ENCONTRADAS DURANTE EL USO NORMAL. COMO RESULTADO, DURANTE EL USO NORMAL, LOS MATERIALES PELIGROSOS EST└N COMPLETAMENTE CONTENIDOS DENTRO DE LA BATER=A. LA BATER=A NO DEBE SER ABIERTA O EXPUESTA AL CALOR PORQUE LOS INGREDIENTES CONTENIDOS PUEDEN SER PELIGROSOS BAJOS CIERTAS CIRCUNSTANCIAS. LA SIGUIENTE INFORMACIËN ES PROVISTA SOLO PARA USO DEL USUARIO.

COMPONENTE	N┌MERO CAS	%	PEL	TLV
CADMIO	7440-43-9	11-26	0.005 TWA (2)	0.05 TWA
HIDRËXIDO DE CADMIO	21041-95-2	11-26	0.005 TWA	0.05 TWA
N=QUEL EN POLVO	7440-02-0	8-17	1 TWA	1 TWA
HIDRËXIDO DE N=QUEL	12054-48-7	5-12	1 TWA	1 TWA
HIDRËXIDO DE POTASIO	1310-58-3	<3	2 TECHO	2 TECHO
NILËN	NO DISPONIBLE	<2	ND	ND
ACERO	NO DISPONIBLE	12-13	ND	ND
OTROS	NO DISPONIBLE	<1	ND	ND

NOTAS:
(1) LAS CONCENTRACIONES VAR=AN DEPENDIENDO EN EL ESTADO DE CARGA O DESCARGA.

(2) TWA ES LA CONCENTRACIËN MEDIA PROMEDIO EN UN PERIODO DE 8 HORAS.

3. IDENTIFICACIËN DE LOS PELIGROS

L=MITES DE VALOR UMBRAL: VER SECCIËN II

EFECTOS DE UNA SOBREEXPOSICIËN (AGUDA):

INHALACIËN:
ES POCO PROBABLE QUE OCURRA UNA INHALACIËN DURANTE EL USO NORMAL DE LASBATER=AS, DEPIDO A LA CONTENCIËN DE LOS MATERIALES PELIGROSOS DENTRO DE LACARCASA DE LA BATER=A. SIN EMBARGO, SI LAS BATER=AS SE EXPONEN AL CALOREXTREMO O A PRESIONES QUE CAUSEN LA RUPTURA DE LA CARCASA, ES POSIBLE QUEOCURRA UNA EXPOSICIËN A LOS COMPONENTES. LA INHALACIËN DE POLVOS DECOBALTO PUEDE RESULTAR EN PADECIMIENTOS PULMONARES.

INGESTIËN:
SI LA BATER=A SE ABRE DENTRO DE LAS V=AS DIGESTIVAS, EL ELECTROLITO PUEDECAUSAR QUEMADURAS.

ABSORCIËN A TRAV┌S DE LA PIEL:
NO SE CUENTA CON EVIDENCIAS DE EFECTOS ADVERSOS SEG┌N LOS DATOSDISPONIBLES.

CONTACTO CON LA PIEL:
LA EXPOSICIËN AL ELECTROLITO CONTEN┌DO DENTRO DE LA BATER=A PUDIERARESULTAR EN QUEMADURAS QU=MICAS. LA EXPOSICIËN AL N=QUEL PUEDE CAUSARDERMATITIS EN ALGUNAS PERSONAS SENSIBLES.

CONTACTO CON LOS OJOS:
LA EXPOSICIËN AL ELECTROLITO CONTENIDO DENTRO DE LA BATER=A PUDIERARESULTAR EN IRRITACIËN SEVERA Y QUEMADURAS QU=MICAS.

CARCINOG┌NESIS:
EL N=QUEL HA SIDO IDENTIFICADO POR EL PROGRAMA TOXICOLËGICO NACIONAL (NTP)COMO UN PROBABLE CARCINËGENO. EL COBALTO HA SIDO IDENTIFICADO POR LA IARCCOMO UN CARCINËGENO 2B.

OTROS EPECTOS DE UNA EXPOSICIËN REPETIDA (CRËNICA):
LA SOBREEXPOSICIËN CRËNICA AL N=QUEL PUEDE RESULTAR EN C└NCER; EL CONTACTOCON LA PIEL PUEDE RESULTAR EN DERMATITIS EN PERSONAS SENSIBLES.

PADECIMIENTOS M┌DICOS QUE PUDIERAN AGRAVARSE POR LA SOBREEXPOSICIËN:
CONSIDERANDO LA INFORMACIËN TOXICOLËGICA DISPONIBLE Y LAS PROPIEDADESF=SICAS Y QU=MICAS DEL PRODUCTO, ES POCO PROBABLE QUE LA SOBREEXPOSICIËNAGRAVE LOS PADECIMIENTOS M┌DICOS EXISTENTES.

4. MEDIDAS DE PRIMEROS AUXILIOS

INGESTIËN: NO INDUZCA EL VËMITO. OBTENGA ATENCIËN M┌DICA DE INMEDIATO.

PIEL:
SI LOS COMPONENTES INTERNOS DE LA CELDA DE UNA BATER=A ABIERTA ENTRAN ENCONTACTO CON LA PIEL, ENJUAGUE DE INMEDIATO CON AGUA DURANTE UN M=NIMO DE 15 MINUTOS.

INHALACIËN:
SI EXISTE UNA POSIBLE EXPOSICIËN A LAS EMANACIONES O LOS POLVOS, SALGADEINMEDIATO AL AIRE PURO Y OBTENGA ATENCIËN MEDICA DE INMEDIATO.

OJOS:
SI EL CONTENIDO DE UNA BATER=A ABIERTA ENTRA EN CONTACTO CON LOS OJOS,ENJUAGUE DE INMEDIATO CON AGUA DE MANERA CONTINUA DURANTE UN M=NIMO DE15 MINUTOS. OBTENGA ATENCIËN M┌DICA.

5. MEDIDAS DE LUCHA CONTRA INCENDIOS

PUNTO DE INFLAMACIËN: NO DISPONIBLE.

TEMPERATURA DE AUTOIGNICIËN: NO DISPONIBLE

L=MITES DE EXPOSICIËN (% VOLUMEN EN EL AIRE):

LEL: NO DISPONIBLE
UEL: NO DISPONIBLE

MEDIOS DE EXTINCIËN:
ES POSIBLE UTILIZAR CUALQUIER TIPO DE MEDIO DE EXTINCIËN EN LAS BATER=AS O SU EMPAQUE.

PROCEDIMIENTOS ESPECIALES DE LUCHA CONTRA INCENDIOS:
LA EXPOSICIËN A TEMPERATURA DE M┴S DE 212 DEG. F PUEDE CAUSAR LAEVAPORACIËN DEL CONTENIDO LIQUIDO DEL ELECTROLITO DE HIDRËXIDO DE POTASIO,LO QUE RESULTAR=A EN LA ROTURA DE LA CELDA. EXISTE LA POSIBILIDAD DE UNAEXPOSICIËN A LAS EMANACIONES DE CADMIO DURANTE UN INCENDIO; UTILICE UNAPARATO RESPIRATORIO AUTENOMO.

6. MEDIDAS EN CASO DE VERTIDO

ES POCO PROBABLE QUE OCURRA UN DERRAME O UNA FUGA, YA QUE LAS CELDAS EST┴NCONTENIDAS EN UNA CARCASA HERM┌TICAMENTE SELLADA. SI LA CARCASA DE LABATER=A SE ABRE, UTILICE ROPA PROTECTORA QUE RESISTA LOS MATERIALESC┴USTICOS. ABSORBA O CONTENGA LOS RESIDUOS DEL DERRAME EN UN MATERIALINERTE. ELIMINE LOS DESECHOS PELIGROSOS EN CUMPLIMIENTO CON LOSREGLAMENTOS ESTATALES Y FEDERALES APLICABLES. LOS RESIDUOS RESULTANTES DEUN DERRAME PUEDEN CONSIDERARSE COMO D002 (CAUSTICO) Y D006 (CADMIO) SEG┌NLA LEY DE CONSERVACIËN Y RECUPERACIËN DE RECURSOS (RCRA). CONSULTE LASECCIËN IV PARA CONOCER LOS PROCEDIMIENTOS DE RESPUESTA ANTE EL FUEGO OLAS EXPLOSIONES.

7. MANIPULACIËN Y ALMACENAMIENTO

ALMACENAMIENTO:
CONSERVE EN UN SITIO FRESCO Y EVITE LA CONDENSACIËN EN LAS TERMINALES DELA BATER=A. LAS TEMPERATURAS ELEVADAS PUEDEN RESULTAR EN UNA MENOR VIDA DE SERVICIO. LAS TEMPERATURAS DE ALMACENAMIENTO ËPTIMAS SON ENTRE -31 DEG. C Y 95 DEG. F.

CONTENCIËN MEC┴NICA:
EN CASO DE QUE EXISTA ALG┌N REQUERIMIENTO ESPECIAL DE ENCAPSULACIËN OSELLADO, CONSULTE A UN REPRESENTANTE DE SANYO ENERGY CORP. SOBRE LASPOSIBLES LIMITACIONES Y PRECAUCIONES.

MANEJO:
LOS CORTOS CIRCUITOS ACCIDENTALES ELEVARAN LA TEMPERATURA DE LA BATER=A YREDUCIR┴N SU VIDA DE SERVICIO. ASEG┌RESE DE EVITAR LOS CORTOS CIRCUITOSPROLONGADOS, YA QUE EL CALOR PUEDA QUEMAR LA PIEL E INCLUSO CAUSAR LARUPTURA DE LA CARCASA DE LA BATER=A. NO AGITE LAS BATER=AS EMPACADAS ENCONTENEDORES A GRANEL. LAS BANDAS O MESAS CON CUBIERTA DE METAL QUE SEUTILICEN PARA EL ENSAMBLAJE DE LAS BATER=AS EN LOS DISPOSITIVOS PUEDENCAUSAR UN CORTO CIRCUITO; APLIQUE UN MATERIAL AISLANTE A LA SUPERFICIE DETRABAJO. SI ES NECESARIO SOLDAR LA CARCASA DE LA BATER=A, CONSULTE A UNREPRESENTANTE DE SANYO ENERGY CORP. PARA CONOCER LAS INDICACIONES A FINDE EVITAR UN DAÑO AL SELLO O UN CORTO CIRCUITO EXTERNO.

CARGA:
ESTAS BATER=AS EST┴N DISEÑADAS PARA RECARGARSE. ES INEVITABLE LA P┌RDIDADEL VOLTAJE Y DE LA CAPACIDAD DE LAS BATER=AS DEBIDO A UNA AUTO-DESCARGADURANTE EL ALMACENAMIENTO PROLONGADO. CARGUE LAS BATER=AS ANTES DEUTILIZARLAS. OBSERVE LA VELOCIDAD DE CARGA ESPECIFICADA, YA QUE LASVELOCIDADES MAYORES PUEDEN CAUSAR UNA ELEVACIËN EN LA PRESIËN DEL GASINTERNO, LO QUE PODR=A RESULTAR EN LA GENERACIËN DE CALOR DAÑINO O EN LARUPTURA/VENTILACIËN DE LA CELDA.

ETIQUETADO:
SI LAS ETIQUETAS DE ADVERTENCIA NORMALES NO EST┴N VISIBLES, ES IMPORTANTECOLOCAR UNA ETIQUETA INDICANDO LO SIGUIENTE:

PRECAUCIËN:
NO DESECHAR EN EL FUEGO, MEZCLAR CON OTROS TIPOS DE BATER=AS, CARGAR AVELOCIDADES SUPERIORES A LAS ESPECIFICADAS, CONECTAR INDEBIDAMENTE O CAUSARUN CORTO CIRCUITO. ESTO PODR=A RESULTAR EN UN SOBRECALENTAMIENTO O EN LAEXPLOSIËN O FUGA DEL CONTENIDO DE LA BATER=A.

SOLDADURA:
SI ES NECESARIO SOLDAR LA CARCASA DE LA BATER=A, CONSULTE A UNREPRESENTANTE DE SANYO ENERGY CORP. PARA CONOCER LAS INDICACIONES A FINDE EVITAR UN DAÑO AL SELLO O UN CORTO CIRCUITO EXTERNO.

8. CONTROLES DE EXPOSICIËN Y PROTECCIËN PERSONAL

REQUERIMIENTOS DE VENTILACIËN: NO SE REQUIERE BAJO UN USO NORMAL.

PROTECCIËN RESPIRATORIA: NO SE REQUIERE BAJO UN USO NORMAL.

PROTECCIËN PARA LOS OJOS: NO SE REQUIERE BAJO UN USO NORMAL.

GUANTES: NO SE REQUIERE BAJO UN USO NORMAL.

9. PROPIEDADES F=SICAS Y QU=MICAS

CADMIO:
PUNTO DE FUSIËN (DEG. F): 610
PUNTO DE EBULLICIËN (DEG. F): 1,407
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPECIFICA (H2O): 8.65 @ 77 DEG. F
SOLUBILIDAD EN AGUA: INSOLUBLE
ASPECTO Y OLOR: METAL LUSTROSO, PLATA-BLANCO, TINTE AZUL
GRAVEDAD ESPECIFICA DE ELECTROLITOS: 1.29 G/CM3
VISCOSIDAD DE ELECTROLITOS: 2.4 MPAS(*MPAS: MILI-PASCAL POR SEGUNDO)

HIDRËXIDO DE CADMIO:
PUNTO DE FUSIËN (DEG. F):
PUNTO DE EBULLICIËN (DEG. C):
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O): 4.79
SOLUBILIDAD EN AGUA: PR┴CTICAMENTE INSOLUBLE
ASPECTO Y OLOR: POLVO

POLVO DE N=QUEL:
PUNTO DE FUSIËN (DEG. F): 2,831
PUNTO DE EBULLICIËN (DEG. F): 5,134
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O): 8.90
SOLUBILIDAD EN AGUA: INSOLUBLE
ASPECTO Y OLOR: POLVO

HIDRËXIDO DE N=QUEL:
PUNTO DE FUSIËN (DEG. F): *
PUNTO DE EBULLICIËN (DEG. F):
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O):
SOLUBILIDAD EN AGUA: INSOLUBLE
ASPECTO Y OLOR: POLVO, VERDE MANZANA

* NOTA: SE DESCOMPONE A M┴S DE 392 DEG. EN NIO Y H2O.

HIDRËXIDO DE POTASIO:
PUNTO DE FUSIËN (DEG. F): *
PUNTO DE EBULLICIËN (DEG. F):
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O):

SOLUBILIDAD EN AGUA:
SOLUBLE EN 0.9 PARTES DE AGUA, 0.6 PARTES EN AGUA HIRVIENDO

ASPECTO Y OLOR: BLANCO O LIGERAMENTE AMARILLO

* NOTA:
EL HIDRËXIDO DE POTASIO EST┴ PRESENTE EN FORMA DE L=QUIDO O PASTA Y FUNCIONA COMO EL ELECTROLITO EN LA CELDA DE LA BATER=A.

10. ESTABILIDAD Y REACTIVIDAD

LAS BATER=AS SON ESTABLES BAJO CONDICIONES DE OPERACIËN NORMALES.

NO SE PRODUCE UNA POLIMERIZACIËN PELIGROSA.

PRODUCTOS PELIGROSOS RESULTANTES DE LA DESCOMPOSICIËN:
ËXIDOS DE N=QUEL Y CADMIO.

CONDICIONES A EVITAR: CALOR, LLAMAS ABIERTAS, CHISPAS Y HUMEDAD.

INCOMPATIBILIDADES POTENCIALES (MATERIALES CON LOS QUE SE DEBE EVITAR EL CONTACTO):
LAS CELDAS DE LA BATER=A EST┴N CONTENIDAS EN UN CONTENEDOR NO REACTIVO; SIN EMBARGO, SI EL CONTENEDOR SE ABRE, EVITE EL CONTACTO DE LOS COMPONENTES INTERNOS DE LA BATER=A CON ┴CIDOS, ALDEH=DOS Y COMPUESTOS DE CARBAMATO.

11. INFORMACION TOXICOLOGICA

CARCINOG┌NESIS:
EL N=QUEL HA SIDO IDENTIFICADO POR EL PROGRAMA TOXICOLËGICO NACIONAL (NPT)COMO UN PROBABLE CARCINËGENO. EL COBALTO HA SIDO IDENTIFICADO POR LA IARCCOMO UN CARCINËGENO 2B.

LA SOBREEXPOSICIËN CRËNICA AL N=QUEL PUEDE RESULTAR EN C┴NCER; EL CONTACTOCON LA PIEL PUEDE RESULTAR EN DERMATITIS EN PERSONAS SENSIBLES.

12. INFORMACIËN ECOLËGICA

SE DEBEN TOMAR LOS CUIDADOS NECESARIOS PARA PROTEGER EL AMBIENTE DEL IMPACTO ADVERSO DE LAS BATER=AS N=QUEL - CADMIO Y DE LOS INGREDIENTES DE LAS BATER=AS.

13. CONSIDERACIONES SOBRE LA ELIMINACION

SANYO RECOMIENDA RECICLAR LAS BATER=AS.

NUESTRAS BATER=AS DE N=QUEL-CADMIOSON RECICLABLES A TRAV┌S DEL PROGRAMA CHARGE UP TO RECYCLE!

DE LA ORGANIZACIËN RECHARGEABLE BATTERY RECYCLING CORPORATION (RBRC). PARAOBTENER MAYOR INFORMACIËN, LLAME AL TEL┌FONO 1-800-8-BATTERY O VISITE ELSITIO WEB WWW.RBRC.ORG. LAS BATER=AS DE N=QUEL-CADMIO DEBEN MANIPULARSE ENCUMPLIMIENTO CON TODOS LOS REGLAMENTOS Y LAS LEYES ESTATALES YFEDERALESAPLICABLES.

RBRC
NI-CD
RECYCLE
1.800.822.8837

NO INCINERE LAS BATER=AS NI LAS SOMETA A TEMPERATURAS MAYORES A LOS 212 DEG. F. ESTO PODR=A VAPORIZAR EL ELECTROLITO L=QUIDO Y CAUSAR LA RUPTURADE LA CELDA. LA INCINERACIËN PUEDE RESULTAR EN UNA EMISIËN DE CADMIO.

14. INFORMACIËN SOBRE EL TRANSPORTE

LAS BATER=AS DE N=QUEL-CADMIO SELLADAS DE SANYO SE CONSIDERAN COMO BATEP=ASDE "CELDA SECA" Y NO EST└N SUJETAS A LOS REGLAMENTOS SOBRE EL TRANSPORTE DEMATERIALES PELIGROSOS DEL DEPARTAMENTO DE TRANSPORTE DE LOS ESTADOS UNIDOS(DOT), LA ORGANIZACIËN DE AVIACIËN CIVIL INTERNACIONAL (ICAO), LAASOCIACIËN DE TRANSPORTE A┌REO INTERNACIONAL (IATA) O LA ASOCIACIËNMAR=TIMA INTERNACIONAL (IMO).

EL ┌NICO REQUERIMIENTO DELDOT PARA EL ENVIË DE BATER=AS DE N=QUEL-CADMIOAPARECE EN LA DISPOSICIËN ESPECIAL 130, MISMA QUE ESTABLECE QUE LASBATER=AS SECAS NO EST└N SUJETAS A LOS REQUERIMIENTOS DE ESTA SECCIËNSIEMPRE Y CUANDO EST┌N DEBIDAMENTE EMPACADAS Y VAYAN A TRANSPORTARSE DEMANERA QUE SE EVITE LA GENERACIËN PELIGROSA DEL CALOR (POR EJEMPLO,MEDIANTE UN AISLAMIENTO EFICAZ EN LAS TERMINALES EXPUESTAS) Y SE PROTEJANCONTRA LOS CORTOS CIRCUITOS. EXISTE UN REQUERIMIENTO SIMILAR EN EL CËDIGO 49 CFR 173.21(C) DEL REGLAMENTO DE MATERIALES PELIGROSOS DEL DEPARTAMENTODE TRANSPORTE DE LOS ESTADOS UNIDOS.

EL REGLAMENTO SOBRE MATERIALES PELIGROSOS DE LA IATA CONTIENE UNREQUERIMIENTO SIMILAR EN LA DISPOSICIËN ESPECIAL A123, MISMA QUE ESTABLECELO SIGUIENTE:
"ESTO APLICA A LAS BATER=AS Y LOS MEDIOS DE ALMACENAMIENTOEL┌CTRICOS QUE NO EST┌N ENLISTADOS EN LA SUBSECCIËN 4.2 - LISTA DEMATERIALES PELIGROSOS. ALGUNOS EJEMPLOS DE DICHAS BATER=AS SON AQUELLAS DE└LCALI-MANGANESO, ZINC-CARBONO, N=QUEL-HIDRURO MET└LICO Y N=QUEL-CADMIO. QUEDA PROHIBIDO EL TRANSPORTE DE CUALQUIER BATER=A EL┌CTRICA O DISPOSITIVOALIMENTADO POR BATER=AS QUE TENGA EL POTENCIAL DE UNA EVOLUCIËN PELIGROSADEL CALOR Y QUE NO EST┌ PREPARADO PARA EVITAR UN CORTO CIRCUITO (POREJEMPLO, EN EL CASO DE LAS BATEP=AS, MEDIANTE EL AISLAMIENTO EFICAZ DE LASTERMINALES EXPUESTAS, O BIEN, EN EL CASO DEL EQUIPO, MEDIANTE LADESCONEXIËN DE LA BATER=A Y LA PROTECCIËN DE LAS TERMINALES EXPUESTAS)".

EL INCUMPLIMIENTO CON ESTOS REQUERIMIENTOS PUEDE RESULTAR EN LA APLICACIËN DE SANCIONES CIVILES SUSTANCIALES.

15. INFORMACIËN REGULATORIA

NO HAY INFORMACIËN DISPONIBLE.

16. OTRAS INFORMACIONES

LA INFORMACIËN Y LAS RECOMENDACIONES CONTENIDAS EN ESTE DOCUMENTO SE PROVEEN BAJO UN CRITERIO DE BUENA FE. SE CONSIDERA QUE ESTOS DATOS SON PRECISOS A LA FECHA DE SU PREPARACIËN. SANYO ENERGY CORP. NO PROVEE GARANT=A ALGUNA, YA SEA EXPRESA O IMPL=CITA, CON RESPECTO A ESTA INFORMACIËN Y RECHAZA CUALQUIER RESPONSABILIDAD DERIVADA DE LA MISMA.

FECHA DE LA ┌LTIMA REVISIËN: MARZO 2006 .

ITEM: 2LPP9 - Cordless Impact Wrench Kit 18.0V

MSDS: C3452 **ORDER: 0122890366** **LP NUMBER: U843437341**

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - C3452

Associated Grainger Items
2AEV6, 2AEW4, 2AEW5, 2AEW6, 2AEW7, 2AEW8, 2AEW9, 2AEX4, 2AEX5, 2AEX6, 2AEX7
2LPP9, 2LPR1, 2LPR2, 2LPR3, 2LPR4, 3FYW1, 3HFX7, 4CY88, 4EB90, 4HVH2, 4HVH3
4HVH4, 4HVH5, 4HVH6, 4HVH7, 4HVH8, 4HVH9, 4LEX5, 4LEX6, 4PKT8, 4PKT9, 4PKU1
4PKU2, 4PKU3, 4WLT4, 4WLT5, 4WXY1, 4WXY2, 5LA45, 5TE14, 5YAV1, 5YAV2, 5YAV3
5YAV4, 6CXN0, 6CXN2, 6CXN3, 6CXN4, 6CXN5, 6CXN8, 6CXN9, 6NUL8, 6NUL9, 6NVK6
6VEE3, 7AH19, 7AH20, 7AH21, 7AH23, 7AH24, 7AH25, 7AH27, 7AH28, 7AH29, 7AH31
7G182, 2YA88, 2YA89, 2YA90, 2YA91, 2YA93, 2YA95, 2YA96, 2YA97, 2YA98, 2YA99
2YA92, 2YA94, 5YAV9, 11A159, 11A160, 11A161, 11A162, 11A163, 11A164, 11A165
11A166, 11A167, 11A168, 11A169, 11A170, 11A171, 11A172, 11A173, 11A174, 11A175
11A176, 11A177, 11A178, 11A179, 11A180, 11A181, 24T840, 24T841, 24T842, 24T843
24T844, 24T845, 24T847, 2AET8, 38A893, 38A895, 38A917, 38A918, 2AET9, 39T746
2AEU1, 4GW163, 21RL65, 2AEU2, 21RU22, 21RU23, 21RU24, 21RV39, 21RV46, 21RV47
21RV48, 21RV49, 21RV42, 21RV43, 21RV44, 21RV40, 21RY15, 21RY16, 21RY17, 2AEV2

PRODUCT SAFETY DATA SHEET

PRODUCT NAME: LITHIUM-ION BATTERY PACKS

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER INFORMATION:
BLACK & DECKER (U.S.) INC.
701 EAST JOPPA ROAD
TOWSON, MD 21286

PHONE: 1-888-698-2571 (INTERNATIONAL 410-329-9200)

CATALOG NUMBERS:
BLACK & DECKER VPX0111 (7 VOLT)

BLACK & DECKER BL1110, BL1310, BL1510 (10.8 VOLT)

BLACK AND DECKER LB12, LBX12, LBXR12 (12 VOLT MAX)

BLACK & DECKER A1114L, BL1114, BL1314, BL1514 (14.4 VOLT)

BLACK & DECKER LB16, LBX16, LBXR16 (16 VOLT MAX)

BLACK & DECKER A1514L, A1518L, A1118L, LB018, BL1118, BL1318, BL1518 (18 VOLT)

BLACK & DECKER LB20, LBX20, LBXR20 (20 VOLT MAX)

DEWALT DCB121, DCB123 (10.8 VOLT)

DEWALT DCB120 (12 VOLT MAX)

DEWALT DC9140, DE9140, DE9141, DC9144, DCB140, DCB141, DCB142 (14.4 VOLT)

DEWALT DC9180, DE9180, DC9181, DE9181, DCB180, DCB181, DCB182 (18 VOLT)

DEWALT DCB200, DCB201, DCB202 (20 VOLT MAX)

DEWALT DC9280, DE9280 (28 VOLT)

DEWALT DC9360, DE9360 (36 VOLT)

PORTER-CABLE PC12BL, PC12BLX, PC12BLXLW (12 VOLT)

PORTER-CABLE PC18BL, PC18BLX, PC18BLEX (18 VOLT)

NOTES:

1. A SUFFIX FOLLOWING CATALOG NUMBER (I.E., "-XJ") MAY BE USED TO DESIGNATE END MARKET.

2. BATTERIES MAY BE SHIPPED IN KITS WITH THE PRODUCTS THEY ARE INTENDED TO POWER.

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
NOT CONSIDERED DANGEROUS AS MANUFACTURED. IF BATTERY IS DAMAGED, EXPOSURE TO PRODUCT COMPONENTS MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. COMBUSTION PRODUCTS FROM A FIRE INVOLVING BATTERIES MAY BE HARMFUL.

POTENTIAL HEALTH EFFECTS: EYES
NONE ANTICIPATED UNDER NORMAL PRODUCT USE AND HANDLING CONDITIONS. IF BATTERY IS DAMAGED, EXPOSURE MAY CAUSE SEVERE IRRITATION OR BURNS.

POTENTIAL HEALTH EFFECTS: SKIN
NONE ANTICIPATED UNDER NORMAL PRODUCT USE AND HANDLING CONDITIONS. IF BATTERY IS DAMAGED, EXPOSURE MAY CAUSE SEVERE IRRITATION OR BURNS.

POTENTIAL HEALTH EFFECTS: INGESTION
NOT CONSIDERED A LIKELY ROUTE OF EXPOSURE UNDER NORMAL PRODUCT USE AND HANDLING CONDITIONS. INGESTION OF MATERIAL FROM A DAMAGED BATTERY MAY CAUSE SERIOUS BURNS TO MOUTH, ESOPHAGUS, AND GASTROINTESTINAL TRACT.

POTENTIAL HEALTH EFFECTS: INHALATION
NONE ANTICIPATED UNDER NORMAL PRODUCT USE AND HANDLING CONDITIONS. IF BATTERY IS DAMAGED, EXPOSURE TO VAPORS OR MIST MAY CAUSE RESPIRATORY IRRITATION.

HMIS RATINGS:
HEALTH 0
FIRE 0
HMIS REACTIVITY 0

HAZARD SCALE:
0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE
* = CHRONIC HAZARD

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

THIS BATTERY IS AN ARTICLE AS DEFINED BY 29 CFR 1910.1200 AND IS NOT A CONTROLLED PRODUCT UNDER WHMIS. EXPOSURE TO HAZARDOUS INGREDIENTS IS NOT ANTICIPATED UNDER NORMAL PRODUCT USE.

SECTION 4 - FIRST AID MEASURES

FIRST AID: EYES
FLUSH EYES WITH LUKEWARM WATER FOR AT LEAST 30 MINUTES WHILE HOLDING THE EYELIDS OPEN. SEEK IMMEDIATE MEDICAL CARE.

FIRST AID: SKIN
REMOVE CONTAMINATED CLOTHING, SHOES AND LEATHER GOODS. FLUSH WITH WATER FOR AT LEAST 30 MINUTES. SEEK MEDICAL ATTENTION IF SYMPTOMS PERSIST.

FIRST AID: INGESTION
NEVER GIVE ANYTHING BY MOUTH IF VICTIM IS UNCONSCIOUS. RINSE MOUTH THOROUGHLY WATER. DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.

FIRST AID: INHALATION
REMOVE PERSON TO FRESH AIR AWAY FROM SOURCE OF CONTAMINATION.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL FIRE HAZARDS:

SEE SECTION 9 FOR FLAMMABILITY PROPERTIES.

BATTERY CELLS MAY RUPTURE WHEN EXPOSED TO EXCESSIVE HEAT. ELECTROLYTE SOLUTION IS FLAMMABLE.

HAZARDOUS COMBUSTION PRODUCTS:
MAY RELEASE TOXIC FUMES IF BURNED OR EXPOSED TO FIRE.

EXTINGUISHING MEDIA:
USE APPROPRIATE EXTINGUISHING AGENT FOR SURROUNDING FIRE. FOR DAMAGED OR RUPTURED CELLS, USE CLASS D EXTINGUISHER OR OTHER APPROPRIATE AGENT. CLASS C FIRE EXTINGUISHERS SHOULD BE USED TO EXTINGUISH ELECTRICAL FIRES. DO NOT USE WATER TO EXTINGUISH ELECTRICAL OR RUPTURED CELL RELATED FIRES.

FIRE FIGHTING EQUIPMENT/INSTRUCTIONS:
FIREFIGHTERS SHOULD WEAR FULL PROTECTIVE GEAR.

NFPA RATINGS:
HEALTH 0
FIRE 0
REACTIVITY 0

HAZARD SCALE:
0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CONTAINMENT PROCEDURES: STOP THE FLOW OF MATERIAL, IF THIS IS WITHOUT RISK.

CLEAN-UP PROCEDURES:
ABSORB SPILL WITH INERT MATERIAL. SHOVEL MATERIAL INTO APPROPRIATE CONTAINER FOR DISPOSAL. CLEAN SPILL AREA WITH DETERGENT AND WATER; COLLECT WASH WATER FOR PROPER DISPOSAL.

EVACUATION PROCEDURES: ISOLATE AREA. KEEP UNNECESSARY PERSONNEL AWAY.

SPECIAL PROCEDURES: AVOID SKIN CONTACT WITH THE SPILLED MATERIAL.

SECTION 7 - HANDLING AND STORAGE

HANDLING PROCEDURES: AVOID DAMAGING OR RUPTURING BATTERY.

STORAGE PROCEDURES:
STORE IN A DRY LOCATION AT ROOM TEMPERATURE. AVOID EXTREME HEAT OR FIRE. KEEP OUT OF REACH OF CHILDREN.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

A: COMPONENT EXPOSURE LIMITS
ACGIH, OSHA, AND NIOSH HAVE NOT DEVELOPED EXPOSURE LIMITS FOR ANY OF THIS PRODUCT'S COMPONENTS.

ENGINEERING CONTROLS: NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS.

PERSONAL PROTECTIVE EQUIPMENT:

PERSONAL PROTECTIVE EQUIPMENT: EYES/FACE
NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS. WEAR SAFETY GLASSES IF HANDLING A DAMAGED BATTERY.

PERSONAL PROTECTIVE EQUIPMENT: SKIN
NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS. WEAR NEOPRENE OR NATURAL RUBBER GLOVES WHEN HANDLING A DAMAGED BATTERY.

PERSONAL PROTECTIVE EQUIPMENT: RESPIRATORY
NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS.

PERSONAL PROTECTIVE EQUIPMENT: GENERAL
EYEWASH FOUNTAINS AND EMERGENCY SHOWERS ARE REQUIRED.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: VARIOUS SHAPED BATTERY

ODOR: NONE

PHYSICAL STATE: SOLID

PH: NA

VAPOR PRESSURE: NA

VAPOR DENSITY: NA

BOILING POINT: NA

MELTING POINT: NA

SOLUBILITY (H2O): INSOLUBLE

SPECIFIC GRAVITY: NA

EVAPORATION RATE: NA

VOC: NA

OCTANOL/H2O COEFF.: NA

FLASH POINT: NA
FLASH POINT METHOD: NA

UPPER FLAMMABILITY LIMIT (UFL): NA
LOWER FLAMMABILITY LIMIT (LFL): NA

BURNING RATE: NA

AUTO IGNITION: NA

SECTION 10 - CHEMICAL STABILITY & REACTIVITY INFORMATION

CHEMICAL STABILITY: THIS IS A STABLE MATERIAL.

CHEMICAL STABILITY: CONDITIONS TO AVOID
AVOID EXPOSURE TO ELEVATED TEMPERATURES AND FIRE.

INCOMPATIBILITY: NOT AVAILABLE.

HAZARDOUS DECOMPOSITION:
MAY RELEASE TOXIC FUMES IF BURNED OR EXPOSED TO FIRE.

POSSIBILITY OF HAZARDOUS REACTIONS: NOT AVAILABLE.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE DOSE EFFECTS:

A:
GENERAL PRODUCT INFORMATION:
IF PRODUCT IS RUPTURED, MATERIAL MAY CAUSE IRRITATION TO THE SKIN, EYES AND RESPIRATORY TRACT.

B:
COMPONENT ANALYSIS - LD50/LC50:
NO LD50/LC50'S ARE AVAILABLE FOR THIS PRODUCT'S COMPONENTS.

CARCINOGENICITY:

A:
GENERAL PRODUCT INFORMATION:
NO INFORMATION AVAILABLE FOR THE PRODUCT.

B:
COMPONENT CARCINOGENICITY:
NONE OF THIS PRODUCT'S COMPONENTS ARE LISTED BY ACGIH, IARC, OSHA, NIOSH, OR NTP.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY:

A:
GENERAL PRODUCT INFORMATION:
NO INFORMATION AVAILABLE FOR THE PRODUCT.

B:
COMPONENT ANALYSIS - ECOTOXICITY - AQUATIC TOXICITY:
NO ECOTOXICITY DATA ARE AVAILABLE FOR THIS PRODUCT'S COMPONENTS.

SECTION 13 - DISPOSAL CONSIDERATIONS

US EPA WASTE NUMBER & DESCRIPTIONS:

COMPONENT WASTE NUMBERS:
NO EPA WASTE NUMBERS ARE APPLICABLE FOR THIS PRODUCT'S COMPONENTS.

DISPOSAL INSTRUCTIONS:

RECYCLE BATTERY. DO NOT DISPOSE OF IN WATER BODIES OR SEWER SYSTEM. ALL WASTES MUST BE HANDLED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SEE SECTION 7 FOR HANDLING PROCEDURES. SEE SECTION 8 FOR PERSONAL PROTECTIVE EQUIPMENT RECOMMENDATIONS.

SECTION 14 - TRANSPORTATION INFORMATION

LITHIUM-ION BATTERIES COMPLY WITH ALL APPLICABLE SHIPPING REGULATIONS AS PRESCRIBED BY INDUSTRY AND LEGAL STANDARDS WHICH INCLUDE UN RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS; IATA DANGEROUS GOODS REGULATIONS AND US DOT REQUIREMENTS. CELLS AND BATTERIES HAVE BEEN TESTED TO SECTION 38.3 OF THE UN RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS MANUAL OF TESTS AND CRITERIA. ALL OF THE BATTERIES LISTED IN THIS SAFETY DATA SHEET ARE QUALIFIED TO BE "EXCEPTED" FROM NEEDING TO BE SHIPPED AS CLASS 9 HAZARDOUS GOODS WHEN IN ORIGINAL PACKAGING.

US DOT INFORMATION:
SHIPPING NAME: NOT REGULATED

TDG INFORMATION:
SHIPPING NAME: NOT REGULATED

SECTION 15 - REGULATORY INFORMATION

US FEDERAL REGULATIONS:

A:
GENERAL PRODUCT INFORMATION:
ALL COMPONENTS ARE ON THE U.S. EPA TSCA INVENTORY LIST.

B:
COMPONENT ANALYSIS:
NONE OF THIS PRODUCTS COMPONENTS ARE LISTED UNDER SARA SECTION 302 (40 CFR 355 APPENDIX A), SARA SECTION 313 (40 CFR 372.65), OR CERCLA (40 CFR 302.4).

STATE REGULATIONS:

A:
GENERAL PRODUCT INFORMATION:
NO ADDITIONAL INFORMATION AVAILABLE.

B:
COMPONENT ANALYSIS - STATE:
NONE OF THIS PRODUCT'S COMPONENTS ARE LISTED ON THE STATE LISTS FROM CA, MA, MN, NJ, PA, OR RI.

CANADIAN WHMIS INFORMATION:

A:
GENERAL PRODUCT INFORMATION:
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS.

B:
COMPONENT ANALYSIS - WHMIS IDL:
NO COMPONENTS ARE LISTED IN THE WHMIS IDL.

ADDITIONAL REGULATORY INFORMATION: NONE

SECTION 16 - OTHER INFORMATION

OTHER INFORMATION:
THE INFORMATION HEREIN IS PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE AS OF THE EFFECTIVE DATE GIVEN. HOWEVER, NO WARRANTY, EXPRESSED OR IMPLIED, IS GIVEN. IT IS THE BUYER'S RESPONSIBILITY TO ENSURE THAT ITS ACTIVITIES COMPLY WITH FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS.

KEY/LEGEND:
EPA = ENVIRONMENTAL PROTECTION AGENCY
TSCA = TOXIC SUBSTANCE CONTROL ACT
ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
IARC = INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
NIOSH = NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
NTP = NATIONAL TOXICOLOGY PROGRAM
OSHA = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
NJTSR = NEW JERSEY TRADE SECRET REGISTRY
WHMIS = WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CANADA)

REVISION: 2.2

PRINTED: 8/31/2011

RBA O CONTENGA LOS RESIDUOS DEL DERRAME EN UN MATERIALINERTE. ELIMINE LOS DESECHOS PELIGROSOS EN CUMPLIMIENTO CON LOSREGLAMENTOS ESTATALES Y FEDERALES APLICABLES. LOS RESIDUOS RESULTANTES DEUN DERRAME PUEDEN CONSIDERARSE COMO D002 (CAUSTICO) Y D006 (CADMIO) SEG┌NLA LEY DE CONSERVACIËN Y RECUPERACIËN DE RECURSOS (RCRA). CONSULTE LASECCIËN IV PARA CONOCER LOS PROCEDIMIENTOS DE RESPUESTA ANTE EL FUEGO OLAS EXPLOSIONES.

7. MANIPULACIËN Y ALMACENAMIENTO

ALMACENAMIENTO:
CONSERVE EN UN SITIO FRESCO Y EVITE LA CONDENSACIËN EN LAS TERMINALES DELA BATER═A. LAS TEMPERATURAS ELEVADAS PUEDEN RESULTAR EN UNA MENOR VIDA DE SERVICIO. LAS TEMPERATURAS DE ALMACENAMIENTO ËPTIMAS SON ENTRE -31 DEG. C Y 95 DEG. F.

CONTENCIËN MEC└NICA:
EN CASO DE QUE EXISTA ALG┌N REQUERIMIENTO ESPECIAL DE ENCAPSULACIËN OSELLADO, CONSULTE A UN REPRESENTANTE DE SANYO ENERGY CORP. SOBRE LASPOSIBLES LIMITACIONES Y PRECAUCIONES.

MANEJO:
LOS CORTOS CIRCUITOS ACCIDENTALES ELEVARAN LA TEMPERATURA DE LA BATER═A YREDUCIR└N SU VIDA DE SERVICIO. ASEG┌RESE DE EVITAR LOS CORTOS CIRCUITOSPROLONGADOS, YA QUE EL CALOR PUEDA QUEMAR LA PIEL E INCLUSO CAUSAR LARUPTURA DE LA CARCASA DE LA BATER═A. NO AGITE LAS BATER═AS EMPACADAS ENCONTENEDORES A GRANEL. LAS BANDAS O MESAS CON CUBIERTA DE METAL QUE SEUTILICEN PARA EL ENSAMBLAJE DE LAS BATER═AS EN LOS DISPOSITIVOS PUEDENCAUSAR UN CORTO CIRCUITO; APLIQUE UN MATERIAL AISLANTE A LA SUPERFICIE DETRABAJO. SI ES NECESARIO SOLDAR LA CARCASA DE LA BATER═A, CONSULTE A UNREPRESENTANTE DE SANYO ENERGY CORP. PARA CONOCER LAS INDICACIONES A FINDE EVITAR UN DAÐO AL SELLO O UN CORTO CIRCUITO EXTERNO.

CARGA:
ESTAS BATER═AS EST└N DISEÐADAS PARA RECARGARSE. ES INEVITABLE LA P┌RDIDADEL VOLTAJE Y DE LA CAPACIDAD DE LAS BATER═AS DEBIDO A UNA AUTO-DESCARGADURANTE EL ALMACENAMIENTO PROLONGADO. CARGUE LAS BATER═AS ANTES DEUTILIZARLAS. OBSERVE LA VELOCIDAD DE CARGA ESPECIFICADA, YA QUE LASVELOCIDADES MAYORES PUEDEN CAUSAR UNA ELEVACIËN EN LA PRESIËN DEL GASINTERNO, LO QUE PODR═A RESULTAR EN LA GENERACIËN DE CALOR DAÐINO O EN LARUPTURA/VENTILACIËN DE LA CELDA.

ETIQUETADO:
SI LAS ETIQUETAS DE ADVERTENCIA NORMALES NO EST└N VISIBLES, ES IMPORTANTECOLOCAR UNA ETIQUETA INDICANDO LO SIGUIENTE:

PRECAUCIËN:
NO DESECHAR EN EL FUEGO, MEZCLAR CON OTROS TIPOS DE BATER═AS, CARGAR AVELOCIDADES SUPERIORES A LAS ESPECIFICADAS, CONECTAR INDEBIDAMENTE O CAUSARUN CORTO CIRCUITO. ESTO PODR═A RESULTAR EN UN SOBRECALENTAMIENTO O EN LAEXPLOSIËN O FUGA DEL CONTENIDO DE LA BATER═A.

SOLDADURA:
SI ES NECESARIO SOLDAR LA CARCASA DE LA BATER=A, CONSULTE A UNREPRESENTANTE DE SANYO ENERGY CORP. PARA CONOCER LAS INDICACIONES A FINDE EVITAR UN DAÑO AL SELLO O UN CORTO CIRCUITO EXTERNO.

8. CONTROLES DE EXPOSICIËN Y PROTECCIËN PERSONAL

REQUERIMIENTOS DE VENTILACIËN: NO SE REQUIERE BAJO UN USO NORMAL.

PROTECCIËN RESPIRATORIA: NO SE REQUIERE BAJO UN USO NORMAL.

PROTECCIËN PARA LOS OJOS: NO SE REQUIERE BAJO UN USO NORMAL.

GUANTES: NO SE REQUIERE BAJO UN USO NORMAL.

9. PROPIEDADES F=SICAS Y QU=MICAS

CADMIO:
PUNTO DE FUSIËN (DEG. F): 610
PUNTO DE EBULLICIËN (DEG. F): 1,407
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPECIFICA (H2O): 8.65 @ 77 DEG. F
SOLUBILIDAD EN AGUA: INSOLUBLE
ASPECTO Y OLOR: METAL LUSTROSO, PLATA-BLANCO, TINTE AZUL
GRAVEDAD ESPECIFICA DE ELECTROLITOS: 1.29 G/CM3
VISCOSIDAD DE ELECTROLITOS: 2.4 MPAS(*MPAS: MILI-PASCAL POR SEGUNDO)

HIDRËXIDO DE CADMIO:
PUNTO DE FUSIËN (DEG. F):
PUNTO DE EBULLICIËN (DEG. C):
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O): 4.79
SOLUBILIDAD EN AGUA: PR┴CTICAMENTE INSOLUBLE
ASPECTO Y OLOR: POLVO

POLVO DE N=QUEL:
PUNTO DE FUSIËN (DEG. F): 2,831
PUNTO DE EBULLICIËN (DEG. F): 5,134
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O): 8.90
SOLUBILIDAD EN AGUA: INSOLUBLE
ASPECTO Y OLOR: POLVO

HIDRËXIDO DE N=QUEL:
PUNTO DE FUSIËN (DEG. F): *
PUNTO DE EBULLICIËN (DEG. F):
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O):
SOLUBILIDAD EN AGUA: INSOLUBLE
ASPECTO Y OLOR: POLVO, VERDE MANZANA

* NOTA: SE DESCOMPONE A M┴S DE 392 DEG. EN NIO Y H2O.

HIDRËXIDO DE POTASIO:
PUNTO DE FUSIËN (DEG. F): *
PUNTO DE EBULLICIËN (DEG. F):
% VOL┴TILES POR VOLUMEN:
PRESIËN DE VAPOR (MMHg):
VELOCIDAD DE EVAPORACIËN:
DENSIDAD DE VAPOR (AIRE = 1):
GRAVEDAD ESPEC=FICA (H2O):

SOLUBILIDAD EN AGUA:
SOLUBLE EN 0.9 PARTES DE AGUA, 0.6 PARTES EN AGUA HIRVIENDO

ASPECTO Y OLOR: BLANCO O LIGERAMENTE AMARILLO

* NOTA:
EL HIDRËXIDO DE POTASIO EST┴ PRESENTE EN FORMA DE L=QUIDO O PASTA Y FUNCIONA COMO EL ELECTROLITO EN LA CELDA DE LA BATER=A.

10. ESTABILIDAD Y REACTIVIDAD

LAS BATER=AS SON ESTABLES BAJO CONDICIONES DE OPERACIËN NORMALES.

NO SE PRODUCE UNA POLIMERIZACIËN PELIGROSA.

PRODUCTOS PELIGROSOS RESULTANTES DE LA DESCOMPOSICIËN:
ËXIDOS DE N=QUEL Y CADMIO.

CONDICIONES A EVITAR: CALOR, LLAMAS ABIERTAS, CHISPAS Y HUMEDAD.

INCOMPATIBILIDADES POTENCIALES (MATERIALES CON LOS QUE SE DEBE EVITAR EL CONTACTO):
LAS CELDAS DE LA BATER=A EST┴N CONTENIDAS EN UN CONTENEDOR NO REACTIVO; SIN EMBARGO, SI EL CONTENEDOR SE ABRE, EVITE EL CONTACTO DE LOS COMPONENTES INTERNOS DE LA BATER=A CON ┴CIDOS, ALDEH=DOS Y COMPUESTOS DE CARBAMATO.

11. INFORMACION TOXICOLOGICA

CARCINOG┌NESIS:
EL N=QUEL HA SIDO IDENTIFICADO POR EL PROGRAMA TOXICOLËGICO NACIONAL (NPT) COMO UN PROBABLE CARCINËGENO. EL COBALTO HA SIDO IDENTIFICADO POR LA IARCCOMO UN CARCINËGENO 2B.

LA SOBREEXPOSICIËN CRËNICA AL N=QUEL PUEDE RESULTAR EN C┴NCER; EL CONTACTOCON LA PIEL PUEDE RESULTAR EN DERMATITIS EN PERSONAS SENSIBLES.

12. INFORMACIËN ECOLËGICA

SE DEBEN TOMAR LOS CUIDADOS NECESARIOS PARA PROTEGER EL AMBIENTE DEL IMPACTO ADVERSO DE LAS BATER=AS N=QUEL - CADMIO Y DE LOS INGREDIENTES DE LAS BATER=AS.

13. CONSIDERACIONES SOBRE LA ELIMINACION

SANYO RECOMIENDA RECICLAR LAS BATER=AS.

NUESTRAS BATER=AS DE N=QUEL-CADMIOSON RECICLABLES A TRAV┌S DEL PROGRAMA CHARGE UP TO RECYCLE!

DE LA ORGANIZACIËN RECHARGEABLE BATTERY RECYCLING CORPORATION (RBRC). PARAOBTENER MAYOR INFORMACIËN, LLAME AL TEL┌FONO 1-800-8-BATTERY O VISITE ELSITIO WEB WWW.RBRC.ORG. LAS BATER=AS DE N=QUEL-CADMIO DEBEN MANIPULARSE ENCUMPLIMIENTO CON TODOS LOS REGLAMENTOS Y LAS LEYES ESTATALES YFEDERALESAPLICABLES.

RBRC
NI-CD
RECYCLE
1.800.822.8837

NO INCINERE LAS BATER=AS NI LAS SOMETA A TEMPERATURAS MAYORES A LOS 212 DEG. F. ESTO PODR=A VAPORIZAR EL ELECTROLITO L=QUIDO Y CAUSAR LA RUPTURADE LA CELDA. LA INCINERACIËN PUEDE RESULTAR EN UNA EMISIËN DE CADMIO.

14. INFORMACIËN SOBRE EL TRANSPORTE

LAS BATER=AS DE N=QUEL-CADMIO SELLADAS DE SANYO SE CONSIDERAN COMO BATER=ASDE "CELDA SECA" Y NO EST┴N SUJETAS A LOS REGLAMENTOS SOBRE EL TRANSPORTE DEMATERIALES PELIGROSOS DEL DEPARTAMENTO DE TRANSPORTE DE LOS ESTADOS UNIDOS(DOT), LA ORGANIZACIËN DE AVIACIËN CIVIL INTERNACIONAL (ICAO), LAASOCIACIËN DE TRANSPORTE A┌REO INTERNACIONAL (IATA) O LA ASOCIACIËNMAR=TIMA INTERNACIONAL (IMO).

EL ┌NICO REQUERIMIENTO DELDOT PARA EL ENVIË DE BATER=AS DE N=QUEL-CADMIOAPARECE EN LA DISPOSICIËN ESPECIAL 130, MISMA QUE ESTABLECE QUE LASBATER=AS SECAS NO EST┴N SUJETAS A LOS REQUERIMIENTOS DE ESTA SECCIËNSIEMPRE Y CUANDO EST┌N DEBIDAMENTE EMPACADAS Y VAYAN A TRANSPORTARSE DEMANERA QUE SE EVITE LA GENERACIËN PELIGROSA DEL CALOR (POR EJEMPLO,MEDIANTE UN AISLAMIENTO EFICAZ EN LAS TERMINALES EXPUESTAS) Y SE PROTEJANCONTRA LOS CORTOS CIRCUITOS. EXISTE UN REQUERIMIENTO SIMILAR EN EL CËDIGO 49 CFR 173.21(C) DEL REGLAMENTO DE MATERIALES PELIGROSOS DEL DEPARTAMENTODE TRANSPORTE DE LOS ESTADOS UNIDOS.

EL REGLAMENTO SOBRE MATERIALES PELIGROSOS DE LA IATA CONTIENE UNREQUERIMIENTO SIMILAR EN LA DISPOSICIËN ESPECIAL A123, MISMA QUE ESTABLECELO SIGUIENTE:
"ESTO APLICA A LAS BATER=AS Y LOS MEDIOS DE ALMACENAMIENTOEL┌CTRICOS QUE NO EST┌N ENLISTADOS EN LA SUBSECCIËN 4.2 - LISTA DEMATERIALES PELIGROSOS. ALGUNOS EJEMPLOS DE DICHAS BATER=AS SON AQUELLAS DE┴LCALI-MANGANESO, ZINC-CARBONO, N=QUEL-HIDRURO MET┴LICO Y N=QUEL-CADMIO. QUEDA PROHIBIDO EL TRANSPORTE DE CUALQUIER BATER=A EL┌CTRICA O DISPOSITIVOALIMENTADO POR BATER=AS QUE TENGA EL POTENCIAL DE UNA EVOLUCIËN PELIGROSADEL CALOR Y QUE NO EST┌ PREPARADO PARA EVITAR UN CORTO CIRCUITO (POREJEMPLO, EN EL CASO DE LAS BATER=AS, MEDIANTE EL AISLAMIENTO EFICAZ DE LASTERMINALES EXPUESTAS, O BIEN, EN EL CASO DEL EQUIPO, MEDIANTE LADESCONEXIËN DE LA BATER=A Y LA PROTECCIËN DE LAS TERMINALES EXPUESTAS)".

EL INCUMPLIMIENTO CON ESTOS REQUERIMIENTOS PUEDE RESULTAR EN LA APLICACIËN DE SANCIONES CIVILES SUSTANCIALES.

15. INFORMACIËN REGULATORIA

NO HAY INFORMACIËN DISPONIBLE.

16. OTRAS INFORMACIONES

LA INFORMACIËN Y LAS RECOMENDACIONES CONTENIDAS EN ESTE DOCUMENTO SE PROVEEN BAJO UN CRITERIO DE BUENA FE. SE CONSIDERA QUE ESTOS DATOS SON PRECISOS A LA FECHA DE SU PREPARACIËN. SANYO ENERGY CORP. NO PROVEE GARANT=A ALGUNA, YA SEA EXPRESA O IMPL=CITA, CON RESPECTO A ESTA INFORMACIËN Y RECHAZA CUALQUIER RESPONSABILIDAD DERIVADA DE LA MISMA.

FECHA DE LA ┌LTIMA REVISIËN: MARZO 2006

ITEM: 2LPP9 - Cordless Impact Wrench Kit 18.0V

MSDS: S0625 **ORDER: 0122890366** **LP NUMBER: U843437341**

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

##

MATERIAL SAFETY DATA SHEET - S0625

Associated Grainger Items
2AEW6, 4CY88, 4HVH4, 2AET8, 2AET9, 2AEU1, 2AEU2, 2AEV2, 2AEV6, 2AEW4, 2AEW5
2AEW7, 2AEW8, 2AEW9, 2AEX4, 2AEX5, 2AEX6, 2AEX7, 2LPP9, 2LPR1, 2LPR2, 2LPR3
2LPR4, 3FYW1, 3HFX7, 4EB90, 4HVH2, 4HVH3, 4HVH5, 4HVH6, 4HVH7, 4HVH8, 4HVH9
4LEX5, 4LEX6, 4PKT8, 4PKT9, 4PKU1, 4PKU2, 4PKU3, 4WLT4, 4WLT5, 4WXY1, 4WXY2
5LA45, 5TE14, 5YAV1, 5YAV2, 5YAV3, 5YAV4, 6CXN0, 6CXN2, 6CXN3, 6CXN4, 6CXN5
6CXN8, 6CXN9, 6NUL8, 6NUL9, 6NVK6, 6VEE3, 7AH19, 7AH20, 7AH21, 7AH23, 7AH24
7AH25, 7AH27, 7AH28, 7AH29, 7AH31, 7G182, 1FYV9, 1FYX2, 2FDB4, 2FDB5, 2FDB6
2KVZ8, 2LKP3, 2LKR5, 2LKR6, 2LKR7, 2LKR8, 2LKR9, 2LKT1, 2LKT2, 2LKT3, 2Z425
3NYA7, 4Z123, 4Z672, 4Z908, 4Z909, 4Z911, 4Z912, 5TPR6

NOMBRE COMÚN: BATERIA DE IONES DE LITIO DE ALTA POTENCIA A BASE DE FOSFATO

FABRICANTE: A123 SYSTEMS

FECHA DE REVISIËN DE LA HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO: 3/27/2007

NÚMERO(S) DE ARTÍCULO DE GRAINGER:
2AEW6, 4CY88, 4HVH4, 2AET8, 2AET9, 2AEU1, 2AEU2, 2AEV2, 2AEV6, 2AEW4,
2AEW5, 2AEW7, 2AEW8, 2AEW9, 2AEX4, 2AEX5, 2AEX6, 2AEX7, 2LPP9, 2LPR1,
2LPR2, 2LPR3, 2LPR4, 3FYW1, 3HFX7, 4EB90, 4HVH2, 4HVH3, 4HVH5, 4HVH6,
4HVH7, 4HVH8, 4HVH9, 4LEX5, 4LEX6, 4PKT8, 4PKT9, 4PKU1, 4PKU2, 4PKU3,
4WLT4, 4WLT5, 4WXY1, 4WXY2, 5LA45, 5TE14, 5YAV1, 5YAV2, 5YAV3, 5YAV4,
6CXN0, 6CXN2, 6CXN3, 6CXN4, 6CXN5, 6CXN8, 6CXN9, 6NUL8, 6NUL9, 6NVK6,
6VEE3, 7AH19, 7AH20, 7AH21, 7AH23, 7AH24, 7AH25, 7AH27, 7AH28, 7AH29,
7AH31, 7G182, 1FYV9, 1FYX2, 2FDB4, 2FDB5, 2FDB6, 2KVZ8, 2LKP3, 2LKR5,
2LKR6, 2LKR7, 2LKR8, 2LKR9, 2LKT1, 2LKT2, 2LKT3, 2Z425, 3NYA7, 4Z123,
4Z672, 4Z908, 4Z909, 4Z911, 4Z912, 5TPR6

NÚMERO(S) DE MODELO DEL FABRICANTE:

A123 SYSTEMS

HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO

NOMBRE DEL PRODUCTO:
BATERIA DE IONES DE LITIO DE ALTA POTENCIA A BASE DE FOSFATO

FECHA DE REVISION: 27 DE MARZO DEL 2007

ROPA DE PROTECCION: NO SE REQUIERE BAJO UN USO NORMAL

CLASIFICACION DE LA NFPA (ESTADOS UNIDOS):
0
0
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CLASIFICACION COMUNIDAD EUROPEA (EC): NO PELIGROSO

WHMIS (CANADA): PRODUCTO NO CONTROLADO POR WHMIS

TRANSPORTE: NO REQUIERE DE CARTELES

SECCION 1: INFORMACION DEL PRODUCTO Y DE LA COMPAÑIA

NOMBRE DEL PRODUCTO:
BATERIA DE IONES DE LITIO DE ALTA POTENCIA A BASE DE FOSFATO

CODIGO DEL PRODUCTO:
ANR26650M1, MODELO NO. FS300001
APR18650M1, MODELO NO. FS300030
AVR18650M1, MODELO NO. FS300031
AHR32113-ULTRA-A, MODELO NO. FS300045
AHR32157-M1-A, MODELO NO. FS300055

USO DEL PRODUCTO: ELECTRICO

FAMILIA QUIMICA: MEZCLA

SINONIMOS: BATERIA DE IONES DE LITIO DE ALTA POTENCIA A BASE DE FOSFATO

FABRICANTE:
A123 SYSTEMS INC
ARSENAL ON THE CHARLES
1 KINGSBURY AVE
WATERTOWN MA 02472

NUMERO DE TELEFONO: (617) 778-5700

FAX: (617) 778-5749

EMERGENCIA LAS 24 HORAS:
CHEMTREC: (800) 424-9300

SECCION 2: COMPOSICION E INFORMACION SOBRE INGREDIENTES

DEBIDO A QUE EL PRODUCTO ES UN ARTICULO SOLIDO, NO SE PREVEE UNA EXPOSICION A LOS INGREDIENTES PELIGROSOS BAJO UN USO NORMAL.

ESTADOS UNIDOS:
ESTA BATERIA ES UN ARTICULO QUE CUMPLE CON LO DISPUESTO EN EL CODIGO 29 CFR 1910.1200 Y POR LO TANTO NO ESTA SUJETA A LOS REQUERIMIENTOS DE LA NORMA DE COMUNICACION DE RIESGOS DE LA OSHA. ESTA HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO CONTIENE INFORMACION VALIOSA E IMPORTANTE EN RELACION CON EL MANEJO SEGURO Y EL USO ADECUADO DEL PRODUCTO. CONSERVE ESTA HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO Y MANTENGALA A DISPOSICION DEL USUARIO DE ESTE PRODUCTO.

CANADA:
ESTE ARTICULO NO ES UN PRODUCTO CONTROLADO SEGUN WHMIS. ESTE PRODUCTO CUMPLE LA DEFINICION DE UN "ARTICULO MANUFACTURADO" Y NO ESTA SUJETO A LA REGLAMENTACION DE LA LEY SOBRE PRODUCTOS PELIGROSOS.

SECCION 3: IDENTIFICACION DE RIESGOS

RIESGOS DE PREPARACION Y CLASIFICACION:
ESTE PRODUCTO NO ES PELIGROSO BAJO UN USO NORMAL. NO ABRA NI QUEME LA BATERIA. LA EXPOSICION A LOS INGREDIENTES CONTENIDOS EN ESTA BATERIA O A LOS PRODUCTOS DE COMBUSTION GENERADOS PUDIERA SER DAÑINA.

COMUNIDAD EUROPEA (EC):
ESTE PRODUCTO NO ESTA CLASIFICADO COMO UN MATERIAL PELIGROSO SEGUN LA DIRECTRIZ 1999/45/EC Y SUS ENMIENDAS. ESTE PRODUCTO CONTIENE INGREDIENTES PELIGROSOS; SIN EMBARGO, NO SE PREVEE QUE DICHOS INGREDIENTES SEAN LIBERADOS AL UTILIZAR EL PRODUCTO. ADEMAS, EXISTE UNA BARRERA QUE PREVIENE LA EXPOSICION DEL USUARIO Y DEL MEDIO AMBIENTE.

ASPECTO, COLOR Y OLOR: OBJETO SOLIDO SIN OLOR.

PRINCIPAL(ES) RUTA(S) DE EXPOSICION:
LOS COMPONENTES QUIMICOS DE ESTE PRODUCTO ESTAN CONTENIDOS EN UN RECIPIENTE SELLADO. EL RIESGO DE EXPOSICION EXISTE UNICAMENTE SI OCURRE UN MAL USO MECANICO, TERMICO O ELECTRICO DE LA BATERIA AL GRADO DE QUE SE VIOLE EL RECIPIENTE. SI ESTO SUCEDE, PUEDE OCURRIR UNA EXPOSICION A LA SOLUCION DEL ELECTROLITO CONTENIDO EN LA BATERIA POR INHALACION, INGESTION, CONTACTO CON LOS OJOS Y CONTACTO CON LA PIEL.

EFECTOS POTENCIALES EN LA SALUD:

AGUDOS (CORTO PLAZO):
CONSULTE LA SECCION 8 PARA CONOCER LOS CONTROLES DE EXPOSICION

EN CASO DE QUE ESTA BATERIA SUFRA UNA ROTURA, LA SOLUCION DEL ELECTROLITO CONTENIDO EN SU INTERIOR PUDIERA SER CORROSIVO Y CAUSAR QUEMADURAS.

INHALACION:
NO SE PREVE QUE LA INHALACION DE LOS MATERIALES DE UNA BATERIA SELLADA SEA UNA RUTA DE EXPOSICION. LOS VAPORES DE UNA BATERIA ROTA PUDIERAN CAUSAR IRRITACION RESPIRATORIA.

INGESTION:
NO SE PREVE QUE LA INGESTION DE LOS MATERIALES DE UNA BATERIA SELLADA SEA UNA RUTA DE EXPOSICION. LA INGESTION DEL CONTENIDO DE UNA BATERIA ABIERTA PUEDE CAUSAR QUEMADURAS QUIMICAS GRAVES EN LA BOCA, EL ESOFAGO Y EL TRACTO GASTROINTESTINAL.

PIEL:
EL CONTACTO ENTRE LA BATERIA Y LA PIEL NO CAUSA DAÑOS. EL CONTACTO DE LA PIEL CON EL CONTENIDO DE UNA BATERIA ABIERTA PUEDE CAUSAR IRRITACION SEVERA O QUEMADURAS EN LA PIEL.

OJOS:
EL CONTACTO ENTRE LA BATERIA Y LOS OJOS NO CAUSA DAÑOS. EL CONTACTO DE LOS OJOS CON EL CONTENIDO DE UNA BATERIA ABIERTA PUEDE CAUSAR IRRITACION SEVERA O QUEMADURAS EN LOS OJOS.

CRONICOS (LARGO PLAZO):
CONSULTE LA SECCION 11 PARA CONOCER LA INFORMACION TOXICOLOGICA ADICIONAL

NO APLICA

PADECIMIENTOS MEDICOS QUE PUDIERAN AGRAVARSE POR LA EXPOSICION:
NO DISPONIBLE

SECCION 4: PRIMEROS AUXILIOS

INHALACION:
EN CASO DE INHALACION DEL CONTENIDO DE UNA BATERIA ABIERTA, RETIRE LA FUENTE DE CONTAMINACION O TRASLADE A LA VICTIMA AL AIRE PURO. OBTENGA ASESORIA MEDICA.

CONTACTO CON LOS OJOS:
SI EL CONTENIDO DE UNA BATERIA ABIERTA ENTRA EN CONTACTO CON LOS OJOS, ENJUAGUELOS DE INMEDIATO CON AGUA TIBIA EN CIRCULACION DURANTE UN MINIMO DE 30 MINUTOS MIENTRAS MANTIENE ABIERTOS LOS PARPADOS. ES POSIBLE UTILIZAR UNA SOLUCION SALINA NEUTRA TAN PRONTO COMO SEA POSIBLE. DE SER NECESARIO, CONTINUE ENJUAGANDO DURANTE EL TRANSPORTE A LA INSTITUCION DE CUIDADOS DE EMERGENCIA. EVITE QUE EL AGUA DE ENJUAGUE CONTAMINADA ENTRE EN CONTACTO CON LA CARA Y EL OJO NO AFECTADO. TRANSPORTE RAPIDAMENTE A LA VICTIMA A UNA INSTITUCION DE CUIDADOS DE EMERGENCIA.

CONTACTO CON LA PIEL:
SI EL CONTENIDO DE UNA BATERIA ABIERTA ENTRA EN CONTACTO CON LA PIEL, RETIRE LA ROPA CONTAMINADA, LOS ZAPATOS Y LOS ARTICULOS DE CUERO TAN PRONTO COMO SEA POSIBLE. ENJUAGUE INMEDIATAMENTE CON AGUA TIBIA EN CIRCULACION DURANTE UN MINIMO DE 30 MINUTOS. SI EL DOLOR O LA IRRITACION PERSISTEN, OBTENGA ATENCION MEDICA. DESECHE O DESCONTAMINE POR COMPLETO LA ROPA, LOS ZAPATOS Y LOS ARTICULOS DE CUERO ANTES DE REUTILIZARLOS.

INGESTION:
EN CASO DE INGESTION DEL CONTENIDO DE UNA BATERIA ABIERTA, EVITE ADMINISTRAR LIQUIDOS O MEDICAMENTOS POR LA VIA ORAL SI LA VICTIMA ESTA PERDIENDO DEL CONOCIMIENTO RAPIDAMENTE, SI ESTA INCONSCIENTE O SI TIENE CONVULSIONES. HAGA QUE LA VICTIMA SE ENJUAGUE BIEN LA BOCA CON AGUA. NO INDUZCA EL VOMITO. PIDA A LA VICTIMA QUE BEBA DE 60 A 240 ML (2-8 ONZAS) DE AGUA. SI EL VOMITO OCURRE DE MANERA NATURAL, INCLINE A LA VICTIMA HACIA ADELANTE PARA REDUCIR EL RIESGO DE ASPIRACION. HAGA QUE LA VICTIMA SE ENJUAGUE BIEN LA BOCA CON AGUA UNA VEZ MAS. TRANSPORTE RAPIDAMENTE A LA VICTIMA A UNA INSTITUCION DE CUIDADOS DE EMERGENCIA.

SECCION 5: MEDIDAS DE COMBATE CONTRA INCENDIOS

PROPIEDADES DE INFLAMABILIDAD:
EN CASO DE QUE ESTA BATERIA SUFRA UNA ROTURA, LA SOLUCION DEL ELECTROLITO CONTENIDO EN SU INTERIOR ES INFLAMABLE. AL IGUAL QUE OCURRE CON CUALQUIER CONTENEDOR SELLADO, LA BATERIA PUEDE PRESENTAR UNA ROTURA SI SE EXPONE AL CALOR EXCESIVO; ESTO PODRIA RESULTAR EN LA LIBERACION DE MATERIALES INFLAMABLES O CORROSIVOS.

MEDIOS DE EXTINCION ADECUADOS:
UTILICE AGUA U OTROS MEDIOS DE EXTINCION QUE SEAN APROPIADOS PARA EL FUEGO CIRCUNDANTE.

MEDIOS DE EXTINCION INCOMPATIBLES: NO DISPONIBLE

EXPLOSION:

SENSIBILIDAD A LOS IMPACTOS MECANICOS:
PODRIAN CAUSAR UNA ROTURA EN CASOS EXTREMOS.

SENSIBILIDAD A LA DESCARGA ESTATICA: NO APLICA

RIESGOS ESPECIFICOS RELACIONADOS CON EL QUIMICO:
LOS INCENDIOS RELACIONADOS CON BATERIAS DE LITIO PUEDEN CONTROLARSE CON AGUA. SIN EMBARGO, AL UTILIZAR AGUA, ES POSIBLE QUE EL GAS DE HIDROGENO EVOLUCIONE. EN UN ESPACIO DE REDUCIDO, EL GAS DE HIDROGENO PUEDE FORMAR UNA MEZCLA EXPLOSIVA. EN ESTA SITUACION, SE RECOMIENDA EL USO DE AGENTES SOFOCANTES PARA EXTINGUIR EL FUEGO.

EQUIPO DE PROTECCION PERSONAL Y PRECAUCIONES PARA EL PERSONAL ENCARGADO DE COMBATIR EL INCENDIO:
AL IGUAL QUE CON CUALQUIER INCENDIO, EVACUE EL AREA Y COMBATA EL FUEGO DESDE UNA DISTANCIA SEGURA. UTILICE EQUIPOS DE PROTECCION COMPLETOS Y UN APARATO DE RESPIRACION AUTONOMO DE PRESION BAJO DEMANDA. COMBATA EL FUEGO DESDE UNA DISTANCIA SEGURA O UN AREA PROTEGIDA.

NFPA:
SALUD 0
INFLAMABILIDAD 0
INESTABILIDAD 0

SECCION 6: MEDIDAS EN CASO DE UNA LIBERACION ACCIDENTAL

PRECAUCIONES PERSONALES:
RESTRINJA EL ACCESO AL AREA HASTA QUE TERMINEN LAS ACTIVIDADES DE LIMPIEZA. NO TOQUE EL MATERIAL DERRAMADO. UTILICE UN EQUIPO DE PROTECCION PERSONAL ADECUADO SEGUN SE INDICA EN LA SECCION 8.

PRECAUCIONES AMBIENTALES:
EVITE QUE EL MATERIAL CONTAMINE EL SUELO E INGRESE AL ALCANTARILLADO O A LAS VIAS DE AGUA.

METODOS DE CONTENCION:
DETENGA LA FUGA SI PUEDE HACERLO CON SEGURIDAD. CONTENGA EL LIQUIDO DERRAMADO CON TIERRA O ARENA SECA. LIMPIE LOS DERRAMES DE INMEDIATO.

METODOS DE LIMPIEZA:
ABSORBA EL MATERIAL DERRAMADO CON UN ABSORBENTE INERTE (TIERRA O ARENA SECA). RECOLECTE EL ABSORBENTE CONTAMINADO EN UN CONTENEDOR DE BASURA ACEPTABLE. RECOLECTE TODO EL ABSORBENTE CONTAMINADO Y DESECHELO SEGUN LAS INSTRUCCIONES DE LA SECCION 13. LAVE EL AREA CON UN CEPILLO Y DETERGENTE CON AGUA; RECOLECTE EL AGUA UTILIZADA PARA LAVAR EL AREA CONTAMINADA Y DESECHELA APROPIADAMENTE.

SECCION 7: MANEJO Y ALMACENAMIENTO

MANEJO:
NO ABRA, DESENSAMBLE, TRITURE O QUEME LA BATERIA. NO EXPONGA LA BATERIA AL CALOR EXTREMO O AL FUEGO.

ALMACENAMIENTO:
CONSERVE LA BATERIA EN UN LUGAR SECO. MANTENGALA A TEMPERATURA AMBIENTE. LAS TEMPERATURAS ELEVADAS PUEDEN REDUCIR LA VIDA DE LA BATERIA. MANTENGA FUERA DEL ALCANCE DE LOS NIÑOS.

SECCION 8: CONTROLES DE EXPOSICION Y PROTECCION PERSONAL

CONTROLES DE INGENIERIA:
UTILICE UNA VENTILACION POR EXTRACCION LOCAL U OTROS CONTROLES DE INGENIERIA PARA MITIGAR LAS FUENTES DE POLVO, VAPORES Y EMANACIONES.

PROTECCION PERSONAL:

PROTECCION RESPIRATORIA: NO ES NECESARIA BAJO CONDICIONES NORMALES.

PROTECCION PARA LA PIEL:
NO ES NECESARIA BAJO CONDICIONES NORMALES. UTILICE GUANTES DE NEOPRENO O HULE NATURAL AL MANIPULAR UNA BATERIA ABIERTA O CON FUGA.

PROTECCION PARA LOS OJOS:
NO ES NECESARIA BAJO CONDICIONES NORMALES. UTILICE GAFAS DE SEGURIDAD AL MANIPULAR UNA BATERIA ABIERTA O CON FUGA.

OTROS EQUIPOS DE PROTECCION:
TENGA ACCESO A UNA REGADERA DE SEGURIDAD Y A UNA ESTACION DE LAVADO DE OJOS EN EL AREA DE TRABAJO INMEDIATA.

MEDIDAS HIGIENICAS:
EVITE COMER, BEBER O FUMAR EN LAS AREAS DE TRABAJO. PONGA EN PRACTICA LAS MEDIDAS DE ASEO Y LIMPIEZA.

SECCION 9: PROPIEDADES FISICAS Y QUIMICAS

ESTADO FISICO: SOLIDO

ASPECTO: BATERIA

pH: NO APLICA

DENSIDAD RELATIVA (AGUA = 1): NO DISPONIBLE

PUNTO DE EBULLICION: NO APLICA

PUNTO DE FUSION: NO APLICA

VISCOSIDAD: NO APLICA

PROPIEDADES OXIDANTES: NO APLICA

PUNTO DE INFLAMACION Y METODO (GRADOS C): NO APLICA

PRESION DE VAPOR (MMHg @ 20 GRADOS C): NO APLICA

DENSIDAD DE VAPOR (AIRE = 1): NO APLICA

SOLUBILIDAD EN AGUA: INSOLUBLE

COEFICIENTE DE DISTRIBUCION DE AGUA/ACEITE: NO APLICA

TIPO DE OLOR: INOLORO

UMBRAL DE OLOR: NO APLICA

VELOCIDAD DE EVAPORACION (N-ACETATO DE BUTILO = 1): NO APLICA

TEMPERATURA DE AUTOIGNICION (GRADOS C): NO APLICA

LIMITES DE INFLAMABILIDAD (%): NO APLICA

SECCION 10: ESTABILIDAD Y REACTIVIDAD

ESTABILIDAD: ESTABLE

CONDICIONES A EVITAR:
EVITE EXPONER LA BATERIA AL FUEGO O A LAS ALTAS TEMPERATURAS. NO DESENSAMBLE NI TRITURE LA BATERIA; TAMPOCO GENERE UN CORTO CIRCUITO NI LA INSTALE CON LA POLARIDAD INCORRECTA. EVITE EL MAL USO MECANICO O ELECTRICO.

MATERIALES INCOMPATIBLES: NO DISPONIBLE

PRODUCTOS PELIGROSOS RESULTANTES DE LA DESCOMPOSICION:
ESTE MATERIAL PUEDE LIBERAR EMANACIONES TOXICAS SI SE QUEMA O SE EXPONE AL FUEGO.

POSIBILIDAD DE REACCIONES PELIGROSAS: NO DISPONIBLE

SECCION 11: INFORMACION TOXICOLOGICA

IRRITACION:
EL RIESGO DE IRRITACION EXISTE UNICAMENTE SI OCURRE UN MAL USO MECANICO, TERMICO O ELECTRICO DE LA BATERIA AL GRADO DE QUE SE VIOLE EL RECIPIENTE. SI ESTO OCURRE, ES POSIBLE QUE CAUSE IRRITACION EN LA PIEL, LOS OJOS Y LAS VIAS RESPIRATORIAS.

SENSIBILIZACION: NO DISPONIBLE

EFECTOS NEUROLOGICOS: NO DISPONIBLE

TERATOGENICIDAD: NO APLICA

TOXICIDAD REPRODUCTIVA: NO APLICA

MUTAGENICIDAD (EFECTOS GENETICOS): NO APLICA

MATERIALES TOXICOLOGICAMENTE SINERGICOS: NO DISPONIBLE

SECCION 12: INFORMACION ECOLOGICA

ECOTOXICIDAD: NO DISPONIBLE

MOVILIDAD: NO DISPONIBLE

PERSISTENCIA Y DEGRADABILIDAD: NO DISPONIBLE

POTENCIAL DE BIOACUMULACION: NO DISPONIBLE

OTROS EFECTOS ADVERSOS: NO DISPONIBLE

SECCION 13: CONSIDERACIONES DE ELIMINACION

METODO DE ELIMINACION DE DESECHOS:
SE RECOMIENDA RECICLAR LAS BATERIAS. NO LAS DESECHE EN EL SUMIDERO, EN EL SUELO O EN CUALQUIER CUERPO DE AGUA. CONSERVE EL MATERIAL PARA SU ELIMINACION SEGUN SE INDICA EN LA SECCION 7 (MANEJO Y ALMACENAMIENTO).

ESTADOS UNIDOS:
ELIMINE LAS BATERIAS EN CUMPLIMIENTO CON LOS REGLAMENTOS FEDERALES, ESTATALES Y LOCALES APLICABLES.

CANADA:
ELIMINE LAS BATERIAS EN CUMPLIMIENTO CON LOS REGLAMENTOS FEDERALES, PROVINCIALES Y LOCALES.

COMUNIDAD EUROPEA (EC):
LOS DESECHOS DEBEN ELIMINARSE EN CUMPLIMIENTO CON LAS DIRECTRICES RELEVANTES DE LA COMUNIDAD EUROPEA Y LOS REGLAMENTOS NACIONALES, REGIONALES Y LOCALES SOBRE EL CONTROL AMBIENTAL. PARA LA ELIMINACION DE LOS DESECHOS DENTRO DE LA COMUNIDAD EUROPEA, ES NECESARIO SEGUIR EL CODIGO APROPIADO DEL CATALOGO EUROPEO DE DESECHOS (EWC).

SECCION 14: INFORMACION RELATIVA AL TRANSPORTE

LAS BATERIAS DE IONES DE LITIO CUMPLEN CON TODA LA REGLAMENTACION APLICABLE SOBRE LOS EMBARQUES SEGUN LAS NORMAS LEGALES E INDUSTRIALES. ESTO INCLUYE EL CUMPLIMIENTO CON LAS RECOMENDACIONES DE LA ONU SOBRE EL TRANSPORTE DE MATERIALES PELIGROSOS; LA PROVISION ESPECIAL A45 DEL REGLAMENTO DE MATERIALES PELIGROSOS DE LA IATA Y LA REGLAMENTACION APLICABLE DEL DEPARTAMENTO DE TRANSPORTE DE LOS ESTADOS UNIDOS EN RELACION CON EL TRANSPORTE SEGURO DE LAS BATERIAS DE IONES DE LITIO. CADA CELDA O BATERIA HA SIDO SOMETIDA A PRUEBAS SEGUN LAS DISPOSICIONES DEL MANUAL DE CRITERIOS Y PRUEBAS DE LA ONU, PARTE III, SUBSECCION 38.3 Y ESTA CLASIFICADA COMO MATERIAL NO PELIGROSO.

SECCION 15: INFORMACION REGLAMENTARIA

ESTADOS UNIDOS:

ESTATUS TSCA:
TODOS LOS COMPONENTES DE ESTE PRODUCTO SE ENLISTAN EN EL INVENTARIO DE LA LEY TSCA.

SARA, TITULO III:
SEC. 302/304: NINGUNO
SEC 311/312: NINGUNO
SEC. 313: NINGUNO
CANTIDAD REPORTABLE CERCLA: NINGUNO

PROPUESTA 65 DEL ESTADO DE CALIFORNIA:
ESTE PRODUCTO NO CONTIENE SUSTANCIAS QUIMICAS QUE CAUSEN CANCER O TOXICIDAD REPRODUCTIVA SEGUN EL ESTADO DE CALIFORNIA.

CANADA:
ESTE PRODUCTO HA SIDO CLASIFICADO DE ACUERDO CON EL CRITERIO DE RIESGO DEL REGLAMENTO CANADIENSE DE PRODUCTOS CONTROLADOS (CPR) Y LA PRESENTE HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO CONTIENE TODA LA INFORMACION REQUERIDA POR

ITEM: 2LPP9 - Cordless Impact Wrench Kit 18.0V

MSDS: S2107 **ORDER: 0122890366** **LP NUMBER: U843437341**

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - S2107

Associated Grainger Items
11A160, 11A161, 11A162, 11A163, 11A164, 11A165, 11A166, 11A167, 11A168, 11A169
11A170, 11A171, 11A172, 11A173, 11A174, 11A175, 11A176, 11A177, 11A178, 11A179
11A180, 11A181, 24T840, 24T841, 24T842, 24T843, 24T844, 24T845, 24T847, 2AET8
2AET9, 2AEU1, 2AEU2, 2AEV2, 2AEV6, 2AEW4, 2AEW5, 2AEW6, 2AEW7, 2AEW8, 2AEW9
2AEX4, 2AEX5, 2AEX6, 2AEX7, 2LPP9, 2LPR1, 2LPR2, 2LPR3, 2LPR4, 2YA88, 2YA89
2YA90, 2YA91, 2YA92, 2YA93, 2YA94, 2YA95, 2YA96, 2YA97, 2YA98, 2YA99, 3FYW1
3HFX7, 4CY88, 4EB90, 4HVH2, 4HVH3, 4HVH4, 4HVH5, 4HVH6, 4HVH7, 4HVH8, 4HVH9
4LEX5, 4LEX6, 4PKT8, 4PKT9, 4PKU1, 4PKU2, 4PKU3, 4WLT4, 4WLT5, 4WXY1, 4WXY2
5LA45, 5TE14, 5YAV1, 5YAV2, 5YAV3, 5YAV4, 5YAV9, 6CXN0, 6CXN2, 6CXN3, 6CXN4
6CXN5, 6CXN8, 6CXN9, 6NUL8, 6NUL9, 6NVK6, 6VEE3, 7AH19, 7AH20, 7AH21, 7AH23
7AH24, 7AH25, 7AH27, 7AH28, 7AH29, 7AH31, 7G182, 21RL65, 11A159

GRAINGER(R*)
FOR THE ONES WHO GET IT DONE

HOJA DE DATOS DE SEGURIDAD

NOMBRECOMÍN: LITHIUM-ION BATTERY PACKS

FABRICANTE: BLACK & DECKER

FECHA DE REVISIËN DE LA HOJA DE DATOS DE SEGURIDAD DEL PRODUCTO: 31/8/2011

NÍMERO(S) DE ART=CULO DE GRAINGER:
11A159, 11A160, 11A161, 11A162, 11A163, 11A164, 11A165, 11A166, 11A167,
11A168, 11A169, 11A170, 11A171, 11A172, 11A173, 11A174, 11A175, 11A176,
11A177, 11A178, 11A179, 11A180, 11A181, 24T840, 24T841, 24T842, 24T843,
24T844, 24T845, 24T847, 2AET8, 2AET9, 2AEU1, 2AEU2, 2AEV2, 2AEV6, 2AEW4,
2AEW5, 2AEW6, 2AEW7, 2AEW8, 2AEW9, 2AEX4, 2AEX5, 2AEX6, 2AEX7, 2LPP9,
2LPR1, 2LPR2, 2LPR3, 2LPR4, 2YA88, 2YA89, 2YA90, 2YA91, 2YA92, 2YA93,
2YA94, 2YA95, 2YA96, 2YA97, 2YA98, 2YA99, 3FYW1, 3HFX7, 4CY88, 4EB90,
4HVH2, 4HVH3, 4HVH4, 4HVH5, 4HVH6, 4HVH7, 4HVH8, 4HVH9, 4LEX5, 4LEX6,
4PKT8, 4PKT9, 4PKU1, 4PKU2, 4PKU3, 4WLT4, 4WLT5, 4WXY1, 4WXY2, 5LA45,
5TE14, 5YAV1, 5YAV2, 5YAV3, 5YAV4, 5YAV9, 6CXN0, 6CXN2, 6CXN3, 6CXN4,
6CXN5, 6CXN8, 6CXN9, 6NUL8, 6NUL9, 6NVK6, 6VEE3, 7AH19, 7AH20, 7AH21,
7AH23, 7AH24, 7AH25, 7AH27, 7AH28, 7AH29, 7AH31, 7G182

NÍMERO (S) DE MODELO DEL FABRICANTE:

1. IDENTIFICACIËN DE LA COMPAÑ=A.

NOMBRE DEL PRODUCTO: LITHIUM-ION BATTERY PACKS

PROVEEDOR:
BLACK & DECKER (U.S.) INC.
701 EAST JOPPA ROAD
TOWSON, MD 21286

TELÍFONO: 1-888-698-2571

INTERNACIONAL: 410-329-9200

NÍMEROS DE CAT¡LOGO:
BLACK &DECKER VPX0111 (7 VOLT)

BLACK &DECKER BL1110, BL1310, BL1510 (10.8 VOLT)

BLACK AND DECKER LB12, LBX12, LBXR12 (12 VOLT MAX)

BLACK &DECKER A1114L, BL1114, BL1314, BL1514 (14.4 VOLT)

BLACK &DECKER LB16, LBX16, LBXR16 (16 VOLT MAX)

BLACK &DECKER A1514L, A1518L, A1118L, LB018, BL1118, BL1318, BL1518 (18 VOLT)

BLACK &DECKER LB20, LBX20, LBXR20 (20 VOLT MAX)

DEWALT DCB121, DCB123 (10.8 VOLT)

DEWALT DCB120 (12 VOLT MAX)

DEWALT DC9140, DE9140, DE9141, DC9144, DCB140, DCB141, DCB142 (14.4 VOLT)

DEWALT DC9180, DE9180, DC9181, DE9181, DCB180, DCB181, DCB182 (18 VOLT)

DEWALT DCB200, DCB201, DCB202 (20 VOLT MAX)

DEWALT DC9280, DE9280 (28 VOLT)

DEWALT DC9360, DE9360 (36 VOLT)

PORTER-CABLE PC12BL, PC12BLX, PC12BLXLW (12 VOLT)

PORTER-CABLE PC18BL, PC18BLX, PC18BLEX (18 VOLT)

NOTAS:
1. UN SUFIJO SIGUIENDO EL NÍMERO DE CAT¡LOGO (POR EJEMPLO., "XJ" SE PUEDE USAR PARA DESIGNAR EL MERCADO FINAL

2. LA BATER=AS PUEDE SER EMBARCADAS EN CONJUNTO CON LOS EQUIPOS A LOS QUE DAR¡N ENERG=A.

2. COMPOSICIËN / INFORMACIËN SOBRE LOS COMPONENTES

ESTA BATER=A ES UN ART=CULO COMO SE DEFINE EN 29 CFR 1910.1200 Y NO ES UN PRODUCTO CONTROLADO BAJO EL WHMIS. LA EXPOSICIËN A INGREDIENTE PELIGROSOS NO SE PUEDE ANTICIPAR BAJO EL USO NORMAL DEL PRODUCTO.

3. IDENTIFICACIËN DE LOS PELIGROS

INFORMACIËN GENERAL DE EMERGENCIA:
NO SE CONSIDERA PELIGROSO. SI LA BATER=A EST¡ DAÑADA, LA EXPOSICIËN A LOS COMPONENTES DEL PRODUCTO PUEDE CAUSAR IRRITACIËN A LOS OJOS, LA PIEL Y LAS V=AS RESPIRATORIAS. LOS PRODUCTOS DE COMBUSTIËN DE LAS BATER=AS EN PUEDEN SER PELIGROSOS.

EFECTOS POTENCIALES EN LA SALUD:
OJOS:
NINGUNA ANTICIPADA BAJO EL USO Y MANEJO NORMAL DEL PRODUCTO. SI LA BATER=A EST¡ DAÑADA, LA EXPOSICIËN PUEDE CAUSAR IRRITACIËN O QUEMADURAS.

EFECTOS POTENCIALES EN LA SALUD:
PIEL:
NINGUNA ANTICIPADA BAJO USO Y MANEJO NORMAL DEL PRODUCTO. SI LA BATER=A EST¡ DAÑADA, LA EXPOSICIËN PUEDE CAUSAR IRRITACIËN O QUEMADURAS.

EFECTOS POTENCIALES EN LA SALUD:
INGESTIËN:
NO SE CONSIDERA UNA V=A PROBABLE DE EXPOSICIËN EN USO YCONDICIONES DE MANEJO NORMALES DEL PRODUCTO. LA INGESTIËN DE MATERIAL DE UNA BATER=A DAÑADA PUEDEN CAUSARQUEMADURAS GRAVES EN BOCA, ESËFAGO Y TRACTO GASTROINTESTINAL.

EFECTOS POTENCIALES EN LA SALUD:
INHALACIËN:
NINGUNA ANTICIPADA BAJO USO Y CONDICIONES DE MANEJO NORMALES DEL PRODUCTO. SI LA BATER=A EST¡ DAÑADA, LA EXPOSICIËN A VAPORES O NEPLINA PUEDE CAUSAR IRRITACIËN RESPIRATORIA

RANGO HMIS:
SALUD 0
FUEGO 0
REACTIVIDAD 0

ESCALA DE PELIGRO:
0 = M=NIMA
1 = LEVE
2 = MODERADA
3 = MEDIA
4 = SEVERA
* = PELIGRO CRËNICO

4. MEDIDAS DE PRIMEROS AUXILIOS

OJOS:
ENJUAGAR CON ABUNDANTE AGUA DURANTE 30 MINUTOS CON LOS PARPADOS ABIERTO. BUSQUE TRATAMIENTO MÍDICO DE INMEDIATO.

PIEL:
REMUEVA LA ROPA CONTAMINADA, LOS ZAPATOS Y ARTICULOS DE CUERO. ENJUAGAR EL ¡REA CON GRANDES CANTIDADES DE AGUA POR AL MENOS 30 MINUTOS. BUSQUE ATENCIËN MÍDICA SI LOS S=NTOMAS PERSISTEN.

INHALACIËN: REMUEVA AL AIRE FRESCO LEJOS DE LA FUENTE DE CONTAMINACIËN.

INGESTIËN:
NUNCA DE NADA POR LA BOCA SI LA VICTIMA ESTA INCONSCIENTE. ENJUAGUE LA BOCA CON ABUNDANTE AGUA. NO INDUCIR VËMITO, Y CONSULTE A UN MÍDICO.

5. MEDIDAS DE LUCHA CONTRA INCENDIOS

PELIGRO GENERAL DE INCENDIO:

VEA LA SECCIËN 9 PARA LAS PROPIEDADES INFLAMABLES.

LAS CELDAS DE LA BATER=A PUEDEN ROMPERSE CUANDO SE EXPONEN AL CALOR EXCESIVO. LA DISOLUCIËN DE ELECTROLITO ES INFLAMABLE.

PRODUCTOS PELIGROSOS DE LA COMBUSTIËN:
PUEDE LIBERAR HUMOS TËXICOS SI SE QUEMA O EXPONE AL FUEGO.

MEDIOS DE EXTINCIËN:
USE AGENTES DE EXTINCIËN APROPIADOS PARA EL FUEGO ALREDEDOR. PARA CELDAS DAÑADAS O ROTAS USE EXTINTORES CLASE D U OTRO AGENTE APROPIADO. AGENTES EXTINTORES CLASE D NO SE PUEDEN USAR PARA FUEGOS ELÍCTRICOS. NO USE AGUA PARA EXTINGUIR FUEGOS ELÍCTRICOS O CELDAS ROTAS.

EQUIPO / INSTRUCCIONES DE LUCHA CONTRA INCENDIOS:
LOS BOMBEROS DEBEN USAR EQUIPO PROTECTOR COMPLETO.

NFPA:
SALUD 0
INFLAMABILIDAD 0
REACTIVIDAD 0

6. MEDIDAS EN CASO DE VERTIDO

PROCEDIMIENTOS DE CONTENCIËN:
DETENGA EL DERRAME, SI ESTO SE PUEDE HACER SIN RIESGO.

PROCEDIMIENTOS DE LIMPIEZA:
ABSORBA EN UN MATERIAL INERTE. COLOQUE EL MATERIAL DENTRO DE UN CONTENEDOR APROPIADO PARA SU DISPOSICIËN. LAVE EL ¡REA CON AGUA Y DETERGENTE, RECOLECTE LAS AGUAS DE LAVADO PARA DESECHO APROPIADO.

PROCEDIMIENTOS DE EVACUACIËN:
AISLÍ EL ¡REA. MANTENGA EL PERSONAL INNECESARIO ALEJADO.

PROCEDIMIENTOS ESPECIALES:
EVITE EL CONTACTO DE LA PIEL CON EL MATERIAL DERRAMADO.

7. MANIPULACIËN Y ALMACENAMIENTO

PROCEDIMIENTOS DE MANEJO: EVITE EL DAÑO O RUPTURA DE LA BATER=A.

PROCEDIMIENTOS DE ALMACENAJE:
ALMACENE EN UNA LOCACIËN SECA A TEMPERATURA AMBIENTE. EVITE EL CALOR EXTREMO O EL FUEGO. MANTENGA FUERA DEL ALCANCE DE LOS NIÑOS.

8. CONTROLES DE EXPOSICIËN Y PROTECCIËN PERSONAL

L=MITES DE EXPOSICIËN DE LOS COMPONENTES:
ACGIH, OSHA, Y NIOSH NO HAN DESARROLLADO L=MITES DE EXPOSICIËN PARA ALGUNO DE LOS COMPONENTES DEL PRODUCTO.

CONTROLES DE INGENIER=A:
NO NECESARIOS BAJO CONDICIONES NORMALES DE USO DEL PRODUCTO.

EQUIPO DE PROTECCIËN PERSONAL:

OJOS / CARA:
NO ES NECESARIA BAJO LAS CONDICIONES NORMALES DE USO DEL PRODUCTO.
USE ANTEOJOS SI MANEJA UNA BATER=A DAÐADA.

PIEL:
NO ES NECESARIA BAJO LAS CONDICIONES NORMALES DE USO DEL PRODUCTO.
USE GUANTES DE NEOPRENO O HULE NATURAL SI MANEJA UNA BATER=A DAÐADA.

PROTECCIËN RESPIRATORIA:
NO ES NECESARIA BAJO LAS CONDICIONES NORMALES DE USO DEL PRODUCTO.

GENERAL: FUENTES LAVAOJOS Y DUCHAS DE EMERGENCIA SON REQUERIDAS.

9. PROPIEDADES F=SICAS Y QU=MICAS

APARIENCIA: BATER=AS DE VARIAS FORMAS.

OLOR: NINGUNO

ESTADO F=SICO: SOLIDO

PH: NO DISPONIBLE

PRESIËN DE VAPOR: NO DISPONIBLE

DENSIDAD DE VAPOR: NO DISPONIBLE

PUNTO DE EBULLICIËN: NO DISPONIBLE

PUNTO DE FUSIËN: NO DISPONIBLE

SOLUBILIDAD (H2O): NINGUNA

GRAVEDAD ESPEC=FICA: NO DISPONIBLE

VELOCIDAD DE EVAPORACIËN: NO DISPONIBLE

VOC: NO DISPONIBLE

COEFICIENTE OCTANOL / AGUA: NO DISPONIBLE

PUNTO DE INFLAMACIËN: NO DISPONIBLE.

L=MITE DE INFLAMABILIDAD SUPERIOR: NO DISPONIBLE
L=MITE DE INFLAMABILIDAD INFERIOR: NO DISPONIBLE

VELOCIDAD DE QUEMADO: NO DISPONIBLE

TEMPERATURA DE AUTOIGNICIËN: NO DISPONIBLE.

10. ESTABILIDAD Y REACTIVIDAD

ESTABILIDAD QU=MICA: ESTABLE

CONDICIONES A EVITAR:
EVITE LA EXPOSICIËN A TEMPERATURAS ELEVADAS Y EL FUEGO.

INCOMPATIBILIDADES: NO DISPONIBLE.

PRODUCTOS PELIGROSOS DE LA DESCOMPOSICIËN:
PUEDE LIBERAR HUMOS TËXICOS SI SE QUEMA O EXPONE AL FUEGO..

POSIBILIDAD DE REACCIONES PELIGROSAS: NO DISPONIBLE.

11. INFORMACION TOXICOLOGICA

EFECTOS AGUADOS:

A:
INFORMACIËN GENERAL DEL PRODUCTO:
SI ESTE PRODUCTO SE ROMPE, EL MATERIAL PUEDE CAUSAR IRRITACIËN A LA PIEL, LOS OJOS Y EL TRACTO RESPIRATORIO.

B:
ANALISIS DE LOS COMPONENTES-LD50/LC50:
NO HAY DATOS DISPONIBLES PARA LD50/LC50 PARA LOS COMPONENTES DE ESTE PRODUCTO.

CARCINOGENICIDAD:

A:
INFORMACIËN GENERAL DEL PRODUCTO:
NO HAY INFORMACIËN DISPONIBLE PARA EL PRODUCTO.

B:
CARCINOGENICIDAD DE LOS COMPONENTES:
NINGUNO DE LOS COMPONENTES ESTA LISTADO POR ACGIH, IARC, OSHA, NIOSH, O NTP.

12. INFORMACIËN ECOLËGICA

ECOTOXICIDAD:

A:
INFORMACIËN GENERAL DEL PRODUCTO:
NO HAY INFORMACIËN DISPONIBLE PARA EL PRODUCTO.

B:
AN┴LISIS DE LOS COMPONENTES - ECOTOXICIDAD - TOXICIDAD ACU┴TICA:
NO HAY DATOS DISPONIBLES PARA LA ECOTOXICIDAD DE LOS COMPONENTES DE ESTE PRODUCTO.

13. CONSIDERACIONES SOBRE LA ELIMINACION

N┌MEROS Y DESCRIPCIONES DE RESIDUO EPA:
NO HAY N┌MEROS DE RESIDUO EPA APLICABLES A LOS COMPONENTES DE ESTE PRODUCTO.

INSTRUCCIONES DE DISPOSICIËN:
RECICLE LA BATER=A. NO DESECHE EN CUERPOS DE AGUA O SISTEMAS DE DESAG■E. TODOS LOS RESIDUOS DEBEN SER MANEJADOS DE ACUERDO A LAS REGULACIONES LOCALES, ESTATALES Y FEDERALES.

VEA LA SECCIËN 7 PARA LOS PROCEDIMIENTOS DE MANEJO. VEA LA SECCIËN 8 PARA LAS RECOMENDACIONES DE EQUIPO DE PROTECCIËN PERSONAL.

14. INFORMACIËN SOBRE EL TRANSPORTE

LAS BATER=AS DE LITIO CUMPLIR CON TODAS LAS NORMAS APLICABLES AL TRANSPORTE COMO PRESCRIBEN LAS NORMAS INDUSTRIA Y LEGALES QUE INCLUYEN LAS RECOMENDACIONES DE LA ONUSOBRE EL TRANSPORTE DE MERCANC=AS PELIGROSAS, LAS NORMAS DE IATA PARA MERCANC=AS PELIGROSAS YREQUISITOS ESTADOUNIDENSES DOT. LAS PILAS Y BATER=AS SE HAN PROBADO PARA LA SECCIËN 38.3DEL MANUAL DE PRUEBAS Y CRITERIOS DE RECOMENDACIONES DE LA ONU SOBRE EL TRANSPORTE DE MERCANC=AS PELIGROSAS. TODAS LAS PILAS QUE FIGURAN EN ESTA HOJA DE DATOS DE SEGURIDADEST┴N CALIFICADAS PARA SER "EXCLUIDAS" DE LAS NECESIDADES DE EMBARQUE COMO PRODUCTOS PELIGROSOS CLASE 9 SIEMPRE Y CUANDO EST┌N EMPAQUETADOS EN EL EMPAQUEORIGINAL.

NOMBRE DE EMBARQUE DOT: NO REGULADO

INFORMACIËN TDG:
NOMBRE DE EMBARQUE: NO REGULADO

15. INFORMACIËN REGULATORIA

REGULACIONES FEDERALES USA:

A:
INFORMACIËN GENERAL DEL PRODUCTO:
TODOS LOS COMPONENTES EST┴N EN LA LISTA TSCA.

B:
AN┴LISIS DE LOS COMPONENTES:
NINGUNO DE LOS COMPONENTES DEL PRODUCTO ESTA LISTADO BAJO LA LEY SARA SECCIËN 302 (40 CFR 355 AP┌NDICE A), SECCIËN 313 (40 CFR 372.65) O LA LEY CERCLA (40 CFR 302.4).

REGULACIONES ESTATALES:

A:
INFORMACIËN GENERAL DEL PRODUCTO: NO HAY INFORMACIËN DISPONIBLE.

B:
AN┴LISIS DE LOS COMPONENTES-POR ESTADO:
NINGUNO DE LOS COMPONENTES DEL PRODUCTO ESTA LISTADO EN LAS LISTAS ESTATALES DE CA, MA, MN, NJ, PA, OR, RI.

INFORMACIËN WHMIS DE CANAD┴:

A:
INFORMACIËN GENERAL DEL PRODUCTO:
ESTE PRODUCTO HA SIDO CLASIFICADO DE ACUERDO CON LOS CRITERIOS DE PELIGRO DE LAS REGULACIONES DE PRODUCTOS CONTROLADOS.

B:
AN┴LISIS DE LOS COMPONENTES-WHMIS IDL:
NO HAY COMPONENTES LISTADOS EN LA WHMIS IDL.

INFORMACIËN REGULATORIA ADICIONAL: NINGUNA.

16. OTRAS INFORMACIONES

OTRA INFORMACIËN:
LA INFORMACIËN PRESENTADA AQU= SE DA DE BUENA FE Y SE CREE QUE ES CORRECTA Y EXACTA A LA FECHA DE ESTE DOCUMENTO. SIN EMBARGO, NO SE DA NINGUNA GARANT=A EXPRESA O IMPL=CITA. ES RESPONSABILIDAD DEL COMPRADOR ASEGURARSE DE QUE SUS ACTIVIDADES CUMPLEN CON LAS LEYES FEDERALES, ESTATALES O PROVINCIALES O LOCALES.

REVISIËN: 2.2

IMPRESO: 31/8/2011

COLGATE-PALMOLIVE Company
MATERIAL SAFETY DATA SHEET

PALMOLIVE TRADITIONAL ORIGINAL

This industrial Material Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: PALMOLIVE TRADITIONAL ORIGINAL
CAS Number: Not applicable - product is a mixture.

COLGATE-PALMOLIVE COMPANY
300 Park Avenue
New York NY 10022

Emergency Telephone:
For emergency involving spill, leak, fire, exposure or accident, call CHEMTREC (800) 424-9300, day or night

Medical Emergency (24HR): For MEDICAL EMERGENCIES involving this product call: (888) 489-3861

General Use: A formulated mixture for consumer goods

2 HAZARDS IDENTIFICATION

Emergency Overview
Appearance: Green blue liquid
Odor: Floral, spicy, woody, musk

Potential Health Effects

Inhalation: No adverse effects due to inhalation are expected.

Eye Contact: Causes severe eye irritation on direct contact.

Skin Contact: Causes skin irritation upon prolonged contact.

Ingestion: May be harmful if swallowed in large quantities.

3 COMPOSITION / INFORMATION ON INGREDIENTS

OSHA-REGULATED COMPONENTS (present at a concentration of > or = 1%)

Chemical Name	CAS-No.	Concentration*
Ethanol (Ethyl alcohol)	64-17-5	1- 5%
Lauramidopropyldimethylamine oxide	61792-31-2	1 - 5%

* All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Listed Carcinogens:

The following components, present at a concentration of > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), OSHA or ACGIH: None.

4 FIRST AID MEASURES

Inhalation: Not applicable.

Eye Contact: Immediately flush eyes with plenty of water for 15 minutes. Get medical attention if irritation persists.

Skin Contact: Flush skin thoroughly with water. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion: Drink 8 ounces of clear water. Get medical attention.

5 FIRE-FIGHTING MEASURES

Flammable Properties: The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures.

Extinguishing Media: Water spray, all-purpose dry chemical

Special Fire Fighting Procedures: Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

NFPA Rating Fire = 1

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8 of the MSDS.

Spill Cleanup Methods: Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

7 HANDLING AND STORAGE

Store at controlled room temperature at 20–25 ºC (68-77ºF).

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: In an industrial work environment no special precautions or control measures are required.

General Hygiene Considerations: In an industrial work environment avoid eye and prolonged skin contact.

Personal Protective Equipment: In an industrial work environment, if a splash is likely, chemical goggles may be needed. Prolonged skin contact may require protective gloves. For consumer use, no unusual precautions are necessary.

Exposure Guidelines:

Chemical Name	CAS No.	Source	Type	Exposure Limits	Notes
Ethanol (Ethyl alcohol)	64-17-5	US. ACGIH TLV	TWA	1000 ppm	
Ethanol (Ethyl alcohol)	64-17-5	US. OSHA Z-1 PEL	TWA	1900 mg/m³ 1000 ppm	

Consult local authorities for recommended exposure limits.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green blue liquid
Odor: Floral, spicy, woody, musk
pH: 6.9 - 7.5
Boiling Point (Initial): No data available.
Flash Point (Method): >= 200 F
Specific Gravity or Relative Density: No data available.
Solubility in Water: Miscible with water.
Viscosity: 300 cps - 700 cps

10 STABILITY AND REACTIVITY

General: This product is stable. Hazardous polymerization will not occur.

Incompatible Materials: Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: None known.

11 TOXICOLOGICAL INFORMATION

This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the MSDS.

12 ECOLOGICAL INFORMATION

There is no ecological information available at this time.

13 DISPOSAL CONSIDERATIONS

General Information: Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water or on the ground.

RCRA Information: Not Regulated.

14 TRANSPORT INFORMATION

DOT Not regulated.

TDG Not regulated.

IATA Not regulated.

IMDG Not regulated.

15 REGULATORY INFORMATION

US Regulations

TSCA Section 8(b): All ingredients are either listed or exempt from listing on TSCA.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Name	RQ
Methanol	5000 lbs
Ethanol (Ethyl alcohol)	100 lbs
Formaldehyde	100 lbs
Sodium bisulfite	5000 lbs

SARA

Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):

Chemical Name	RQ	TPQ
Formaldehyde	100 lbs	500 lbs

Section 313 Toxic Release Inventory (40 CFR 372): Not regulated.

Clean Air Act

Clean Air Act 111 Standards of Performance for New Stationary Sources: Formaldehyde; Methanol; Ethyl alcohol

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Formaldehyde

Clean Water Act

Clean Water Act Section 307(a)(1) Toxic Pollutants: Not regulated.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): Formaldehyde; Sodium bisulfite

RCRA Information: Not regulated.

State Regulations

New Jersey Right-To-Know List: Ethanol (Ethyl alcohol)

Pennsylvania Right-To-Know List: Ethanol (Ethyl alcohol); Formaldehyde

Massachusetts Right-To-Know List: Ethanol (Ethyl alcohol); Formaldehyde

Canada

Canadian Controlled Products Regulations: This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

Canada; Workplace Hazardous Materials Information System (WHMIS) Listed Material: Lauramidopropyldimethylamine oxide, Myristamidopropylamine oxide, Ethanol (Ethyl alcohol)

In accordance with OSHA 29 CFR 1910.1048 formaldehyde is not listed in Section 3 of this MSDS however, formaldehyde is regulated by State and Federal regulations at varying concentrations. State and Federal Regulatory information can be found above in Section 15.

16 OTHER INFORMATION

Issue Date: 20-Feb-2009
Supersedes Date: 09-Apr-2007
SDS No.: 2*7359, 3*12406
MSDS Status: Revised
Disclaimer: The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

Material Safety Data Sheet

1. Chemical Product and Company Identification

DESCRIPTION: CRAFT BOND MULTI-PURPOSE SPRAY ADHESIVE
PRODUCT TYPE: RUBBER BASED ADHESIVE
APPLICATION: E421, E422, E64421 (AEROSOLS)

· Manufacturer/Supplier Information

MSDS Prepared by:
Elmer's Products, Inc.
1 Easton Oval
Columbus, OH 43219

Emergency Phone Number
Poison Control Center
1-888-516-2502

For additional health, safety or regulatory information, call 1-888-435-6377.
Call 1-800-848-9400 to place an order or request additional MSDSs.

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

		% by weight
67-64-1	*Acetone	10-30
74-98-6	Propane	10-30
75-28-5	Isobutane	10-30
107-83-5	2-Methylpentane	30-50
109-66-0	Pentane	1-5
115-10-6	Dimethyl Ether	1-5

3. Hazards Identification

3.1 Emergency Overview

```
Appearance                          White to off white in color
Odor                                Mint when wet
DANGER!
EXTREMELY FLAMMABLE
May be harmful if inhaled.  May cause irritation of nose, throat and
lungs.
Can cause central nervous system depression.
Causes skin irritation.
Causes eye irritation.
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· **HMIS Rating**

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      HEALTH = 2 (moderate)
FLAMMABILITY = 4 (severe)
  REACTIVITY = 0 (minimal)
     CHRONIC = *
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3.2 Potential Health Effects

· **Immediate Hazards**

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INGESTION:   Not expected to be harmful under normal conditions of
             use.
INHALATION:  May be harmful if inhaled.  Liquid or vapor may cause
             irritation of nose, throat and lungs.
             Can cause central nervous system depression.
SKIN:        Causes irritation.
EYES:        Causes irritation.
Acetone        67-64-1
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
even asphyxiation.
Propane        74-98-6
This material is a simple asphyxiant.  Signs and symptoms of
overexposure include cyanosis, respiratory distress, headache,
dizziness, drowsiness, unconsciousness and asphyxiation.  Can cause
central nervous system depression.
2-Methylpentane       107-83-5
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting and drowsiness.
Pentane       109-66-0
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
even asphyxiation.
Dimethyl Ether       115-10-6
Can cause central nervous system depression.  Signs and symptoms may
include headache, dizziness, nausea, vomiting, unconsciousness and
```

even asphyxiation.

- **Delayed Hazards**

Acetone 67-64-1
Ingestion may cause liver damage.
Ingestion may cause kidney damage.
-- See Footnote C.
Footnote C: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

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4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.
INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.
SKIN: Flush with plenty of water. Remove contaminated clothing. Call a physician if irritation persists.
EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to insure water contact with entire surface of eyes and lids. Call a physician.

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5. Fire Fighting Measures

Autoignition Temperature	Not available
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	18.0/1.0
Flash Point	-156 deg F (pensky-martens c.c.)

EXTREMELY FLAMMABLE.
DO NOT INCINERATE (BURN) CONTAINER. AVOID HEAT. KEEP CONTAINER BELOW 120 F (50 C). High temperatures may cause bursting. Do not place container on radiator, stove, in direct sunlight or near other heat sources. DO NOT PUNCTURE CONTAINER. Contents under pressure will discharge. AVOID OPEN FLAMES, SPARKS, PILOT LIGHTS. DO NOT SMOKE. Vapor may ignite explosively. Spray mist or vapor evaporating from a deposited film is heavier than air and may settle in low places or travel outward to a source of ignition and flashback. In case of fire, use dry chemical, foam or CO2. Water may be ineffective, but should be used to keep fire-exposed containers cool.

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6. Accidental Release Measures

Eliminate all ignition sources. Soak up with absorbent material and remove to a chemical disposal area. Prevent entry into natural bodies of water.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.
Wash thoroughly after handling. Always use appropriate Personal Protective Equipment (PPE).
INHALATION: USE WITH ADEQUATE VENTILATION. To avoid breathing vapors or spray mist, open windows and doors or use other means, such as an exhaust fan to ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness, increase fresh air, wear respiratory protection (NIOSH/MSHA TC23C or equivalent), or leave the area.
SKIN: Avoid contact with skin and clothing.
EYES: Avoid contact with eyes.

7.2 Storage

Store in a cool, well-ventilated area.
Store in cool, dry area away from sun, heat, oxidizing materials and alkaline materials.
Keep containers tightly closed.
Do not store at temperatures above 50 C.
Keep away from heat, sparks, flame and other ignition sources.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We,

therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.
If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

Acetone 67-64-1
ACGIH TLV: 500 ppm (1188 mg/m³) TWA; 750 ppm (1782 mg/m³) STEL
OSHA PEL: 1000 ppm (2400 mg/m³)TWA
REMANDED PEL: 750 ppm (1800 mg/m³) TWA; 1000 ppm (2400 mg/m³) STEL
OSHA 1989 PEL remanded, but in effect in some states
Propane 74-98-6
ACGIH TLV: 2500 ppm (4508 mg/m³) TWA
OSHA PEL: 1000 ppm (1800 mg/m³) TWA
Isobutane 75-28-5
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED
2-Methylpentane 107-83-5
ACGIH TLV: HexIso.500ppm(1760mg/m³)TWA;1000ppm(3500mg/m³)STEL
OSHA PEL: REMANDED PEL: HexIso.500ppm(1800mg/m³)TWA;1000ppm(3600mg/m³)STEL
OSHA 1989 PEL remanded, but in effect in some states
Pentane 109-66-0
ACGIH TLV: 600 ppm (1770 mg/m³) TWA
OSHA PEL: 1000 ppm (2950 mg/m³) TWA
REMANDED PEL: 600 ppm (1800 mg/m³) TWA; 750 ppm (2250 mg/m³)STEL
OSHA 1989 PEL remanded, but in effect in some states
Dimethyl Ether 115-10-6
ACGIH TLV: NONE ESTABLISHED
OSHA PEL: NONE ESTABLISHED

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9. Physical and Chemical Properties

Percent Volatiles	82.5
pH @ 25 C	Not applicable
Specific Gravity	0.69

Appearance	White to off white in color
Autoignition Temperature	Not available
Boiling Point	-44 - 150 deg F
Vapor Density (Air=1)	> 1
Vapor Pressure, mm Hg @ 20 C	Not determined
Evaporation Rate (Butyl Acetate=1)	>1
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	18.0/1.0
Flash Point	-156 deg F (pensky-martens c.c.)
Freezing Point	Not available
Odor	Mint when wet
Odor Threshold, ppm	Not available
Solubility in Water	Negligible
Coefficient of Water/Oil Distrib.	Not applicable

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

- **Incompatibilities:**

Strong oxidizers.

- **Decomposition products may include:**

Oxides of carbon.

- **Hazardous polymerization:**

Will not occur.

- **Other Hazards:**

None known to company.

11. Toxicological Information

See Section 3 Hazards Identification information.
Acetone 67-64-1
LC50: Not available
LD50: oral-rat=5800 mg/kg (RTECS); skin-rabbit=20 g/kg (RTECS)
Propane 74-98-6

LC50: Not available
LD50: Not available
Isobutane 75-28-5
LC50: Not available
LD50: Not available
2-Methylpentane 107-83-5
LC50: Not available
LD50: Not available
Pentane 109-66-0
LC50: Not available
LD50: Not available
Dimethyl Ether 115-10-6
LC50: Not available
LD50: Not available

12. Ecological Information

Not determined.

13. Disposal Considerations

Dispose of according to local, state/provincial, and federal requirements.
Empty container: May contain explosive vapors. DO NOT cut, puncture or weld on or nearby. Incineration will cause container to burst violently.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
ORM-D Consumer Commodity.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

· OSHA Hazard Communication Standard 29CFR1910.1200

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

· SARA Title III: Section 311/312

Fire hazard
Sudden release of pressure (explosion) hazard
Immediate health hazard
Delayed health hazard

· SARA Title III Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.
None required per SARA TITLE III SECTION 313.

· TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

· Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS

contains all the information required by the CPR.
CLASS D, DIV 2B
CLASS B, DIV 5
CLASS A

· **Canadian Environmental Protection Act (CEPA)**

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

· **National Pollutant Release Inventory (NPRI)**

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.
None required.

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16. Other Information

CL (Cautionary Labeling): Products bearing the CL (Cautionary Labeling) Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified to be properly labeled in a program of toxicological evaluation by a medical expert. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695.

· **User's Responsibility**

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

· **Disclaimer**

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind

shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CURRENT ISSUE: 18-SEP-10
PREVIOUS ISSUE: 10-NOV-09

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **2-26® Multi-Purpose Precision Lubricant** (aerosol)

Product Number (s): **02004, 02005, 02024, 72005**

Product Use: Multi-Purpose Lubricant

Manufacturer / Supplier Contact Information:

In United States:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300 (General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:
CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:
CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Flammable. Harmful or Fatal if Swallowed. Contents Under Pressure.
Appearance & Odor: Amber liquid, mild petroleum odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: Slightly irritating but does not injure eye tissue.

SKIN: Frequent or prolonged contact may irritate and cause dermatitis. Low order of toxicity.

INHALATION: High vapor concentrations (attainable at elevated temperatures well above ambient) are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects.

INGESTION: Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

CHRONIC EFFECTS: None known

TARGET ORGANS: None known

Medical Conditions Aggravated by Exposure: pre-existing dermatitis

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Isoparaffinic hydrocarbon	64742-47-8	65 – 75
White mineral oil	8042-47-5	15 – 25
Corrosion inhibitor blend	proprietary	5 – 15
Carbon dioxide	124-38-9	1 – 5

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: If swallowed, do NOT induce vomiting. Keep at rest. Get prompt medical attention.

Note to Physicians: This product may pose as an aspiration hazard.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).

Flash Point: 192°F / 89°C (TCC) Upper Explosive Limit: 5.0
Autoignition Temperature: ND Lower Explosive Limit: 0.7

Fire and Explosion Data:

Suitable Extinguishing Media: Foam, dry chemical, or water spray

Products of Combustion: Oxides of carbon

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode. Vapors may accumulate in a confined space and create a flammable atmosphere.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate

respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Do not use near an open flame, heat, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Isoparaffinic hydrocarbon	NE	NE	NE	NE	1200	mfr	mg/m^3
White mineral oil	5*	NE	5*	10*	NE		mg/m^3
Corrosion inhibitor blend	NE	NE	NE	NE	NE		
Carbon dioxide	5000	30,000 (v)	5000	30,000	NE		ppm
N.E. – Not Established	(c) – ceiling	(s) – skin	(v) – vacated	* – oil mist			

mfr – manufacturer's recommendation

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: amber
Odor: mild petroleum

Odor Threshold: ND
Specific Gravity: 0.82
Initial Boiling Point: 435°F / 224°C
Freezing Point: ND
Vapor Pressure: < 0.1 mmHg @ 68°F / 20°C
Vapor Density: > 1 (air = 1)
Evaporation Rate: slow
Solubility: negligible in water
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: wt %: 0 g/L: 0 lbs./gal: 0

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Temperature extremes, sources of ignition

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: Oxides of carbon

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Isoparaffinic hydrocarbon	> 5 g/kg	> 2 g/kg	> 5 mg/L/4H
White mineral oil	> 5 g/kg	> 2 g/kg	No data
Corrosion inhibitor blend	No data	No data	No data
Carbon dioxide	No data	No data	470,000 ppm/30M

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Isoparaffinic hydrocarbon	No	No	No	S (mild)	Unknown
White mineral oil	No	No	No	Unknown	Unknown
Corrosion inhibitor blend	No	No	No	Unknown	Unknown
Carbon dioxide	No	No	No	No	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this

product.

Ecotoxicity: No information available
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is not a RCRA hazardous waste. (See 40 CFR Part 261.20 – 261.33)
Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D

ICAO/IATA (air): Consumer Commodity, ID8000, 9

IMO/IMDG (water): Aerosols, UN1950, 2.1, Limited Quantity

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	Yes
Reactive Hazard	No
Release of Pressure	Yes
Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None

Occupational Safety and Health Administration:
This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: In states with Consumer Products VOC regulations, this product is compliant as a Multi-Purpose Lubricant.

State Right to Know:
New Jersey: None
Pennsylvania: None
Massachusetts: None
Rhode Island : None

Canadian Regulations:

Controlled Products Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, B5, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

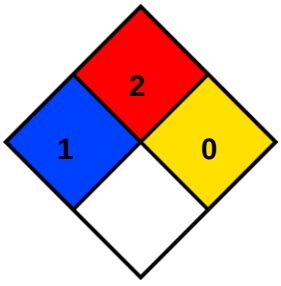
RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	**1**
Flammability:	**2**
Reactivity:	**0**
PPE:	**B**

NFPA



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 591C
Revision Date: 08/29/2011

Changes since last revision: Section 13: disposal considerations

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstract Service
CFR:	Code of Federal Regulations
DOT:	Department of Transportation
DSL:	Domestic Substance List
g/L:	grams per Liter
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods
IMO:	International Maritime Organization
lbs./gal:	pounds per gallon
LC:	Lethal Concentration
LD:	Lethal Dose
NA:	Not Applicable
ND:	Not Determined
NIOSH:	National Institute of Occupational Safety & Health
NFPA:	National Fire Protection Association
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PMCC:	Pensky-Martens Closed Cup
PPE:	Personal Protection Equipment
ppm:	Parts per Million
RoHS:	Restriction of Hazardous Substances
STEL:	Short Term Exposure Limit
TCC:	Tag Closed Cup
TWA:	Time Weighted Average
WHMIS:	Workplace Hazardous Materials Information System

SAFETY DATA SHEET

1. Identification

Product identifier	**2-26® Multi-Purpose Precision Lubricant**
Other means of identification	
Product code	02004
Recommended use	Multi-purpose lubricant
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Compressed gas
Health hazards	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Toxic to aquatic life.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not apply while equipment is energized. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid release to the environment.
Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.
Storage	Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (petroleum), hydrotreated light		64742-47-8	60 - 70
Light mineral oil		8042-47-5	10 - 20
n-Butyl stearate		123-95-5	3 - 5
carbon dioxide		124-38-9	1 - 3
Petrolatum		8009-03-8	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact
Rinse skin with water/shower. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.

Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed
Aspiration may cause pulmonary edema and pneumonitis.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media
Alcohol resistant foam. Dry chemical powder. Dry chemicals. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire-fighting equipment/instructions
In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up.

General fire hazards
Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Prevent product from entering drains. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3	
		5000 ppm	
Light mineral oil (CAS 8042-47-5)	PEL	5 mg/m3	Mist.
Petrolatum (CAS 8009-03-8)	PEL	5 mg/m3	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
carbon dioxide (CAS 124-38-9)	STEL	30000 ppm	
	TWA	5000 ppm	
Light mineral oil (CAS 8042-47-5)	TWA	5 mg/m3	Inhalable fraction.
n-Butyl stearate (CAS 123-95-5)	TWA	10 mg/m3	
Petrolatum (CAS 8009-03-8)	TWA	5 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3	
		30000 ppm	
	TWA	9000 mg/m3	
		5000 ppm	
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	100 mg/m3	
Light mineral oil (CAS 8042-47-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Petrolatum (CAS 8009-03-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear protective gloves such as: Nitrile. Neoprene.
Other	Wear suitable protective clothing.
Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Aerosol.
Color	Amber.
Odor	Mild petroleum.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-56.2 °F (-49 °C) estimated
Initial boiling point and boiling range	Not available.
Flash point	200 °F (93.3 °C) Tag Closed Cup
Evaporation rate	Slow.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0.6 % estimated
Flammability limit - upper (%)	5.5 % estimated
Vapor pressure	1557.7 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.84 estimated
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	392 °F (200 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	88.4 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Headache. Nausea, vomiting. Diarrhea.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Product	Species	Test Results
2-26® Multi-Purpose Precision Lubricant		
Acute		
Dermal		
LD50	Rabbit	2475 mg/kg estimated
Inhalation		
LC50	Rat	58740 ppm, 4 hours estimated
Oral		
LD50	Rat	6263 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Light mineral oil (CAS 8042-47-5) 3 Not classifiable as to carcinogenicity to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.

12. Ecological information

Ecotoxicity Toxic to aquatic life.

Components		Species	Test Results
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)			
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	2.2 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Empty container can be recycled. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not puncture, incinerate or crush. Contents under pressure. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code Not regulated.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1950
UN proper shipping name Aerosols, flammable, Limited Quantity
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions N82
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

IATA

UN number UN1950
UN proper shipping name Aerosols, flammable, Limited Quantity
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Packing group Not applicable.
ERG Code 10L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN1950
UN proper shipping name AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)
Class 2
Subsidiary risk -
Packing group Not applicable.

Environmental hazards

Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations

All components are on the U.S. EPA TSCA Inventory List.
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Distillates (petroleum), hydrotreated light (CAS 64742-47-8)
Petrolatum (CAS 8009-03-8)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

carbon dioxide (CAS 124-38-9)
Light mineral oil (CAS 8042-47-5)

US. New Jersey Worker and Community Right-to-Know Act

Distillates (petroleum), hydrotreated light (CAS 64742-47-8)
carbon dioxide (CAS 124-38-9)

US. Pennsylvania Worker and Community Right-to-Know Law

carbon dioxide (CAS 124-38-9)
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)
Light mineral oil (CAS 8042-47-5)

US. Rhode Island RTK

None.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	97.3 %
Consumer products (40 CFR 59, Subpt. C)	Not regulated

State

Consumer products	This product is regulated as a Multi-Purpose Lubricant. This product is compliant for use in all 50 states.
VOC content (CA)	0 %
VOC content (OTC)	0 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-12-2014
Revision date	04-11-2016
Prepared by	Allison Cho
Version #	04
Further information	CRC # 591B-C
HMIS® ratings	Health: 1 Flammability: 3 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 1 Flammability: 3 Instability: 0
NFPA ratings	

Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

SAFETY DATA SHEET

1. Identification

Product identifier **HV Switchgear Lubricant**

Other means of identification

Product code 02060

Recommended use Lubricant for high voltage switch gear

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)
703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
Environmental hazards	Hazardous to the ozone layer	Category 1
OSHA defined hazards	Not classified.	

Label elements

Signal word Warning

Hazard statement Contains gas under pressure; may explode if heated. Causes skin irritation. Causes eye irritation.

Precautionary statement

Prevention Wash hands thoroughly after handling. Wear protective gloves. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area.

Response If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage Store in a well-ventilated place. Protect from sunlight. Exposure to high temperature may cause can to burst.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Harms public health and the environment by destroying ozone in the upper atmosphere.

Supplemental information

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride and hydrogen chloride.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
1,1,1,2-Tetrafluoroethane	HFC-134a	811-97-2	40 - 50
HCFC-225cb		507-55-1	30 - 40
HCFC-225ca		422-56-0	10 - 20
Trans-1,2-dichloroethylene		156-60-5	5 - 10
Polydimethylsiloxane		63148-62-9	3 - 5

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing. Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms/effects, acute and delayed Irritation of eyes and mucous membranes.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Contents under pressure.

Special protective equipment and precautions for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire-fighting equipment/instructions In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Environmental precautions Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Observe good industrial hygiene practices. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities Level 1 Aerosol.

Store in a well-ventilated place. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Trans-1,2-dichloroethylene (CAS 156-60-5)	PEL	790 mg/m3
		200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	790 mg/m3
		200 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1,1,2-Tetrafluoroethane (CAS 811-97-2)	TWA	4240 mg/m3
		1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear eye/face protection. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Aerosol.

Color Off-white.

Odor Slight ethereal.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -204 °F (-131.1 °C) estimated

Initial boiling point and boiling range 118 °F (47.8 °C) estimated

Flash point None (Tag Closed Cup)

Evaporation rate Fast.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 6.7 % estimated

Flammability limit - upper (%) 18 % estimated

Vapor pressure	2627 hPa estimated
Vapor density	7 (air = 1)
Relative density	1.46 estimated
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	860 °F (460 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	94.1 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Keep away from heat, sparks and open flame. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride and hydrogen chloride.
Incompatible materials	Strong oxidizing agents. Alkalis. Alkaline earth metals.
Hazardous decomposition products	Carbon oxides. Hydrochloric acid. Hydrofluoric acid. Carbonyl halides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Irritant effects.

Information on toxicological effects

Acute toxicity Causes eye irritation.

Product	Species	Test Results
HV Switchgear Lubricant		
Acute		
Dermal		
LD50	Rabbit	5265.2861 mg/kg estimated
Inhalation		
LC50	Rat	65266.2695 ppm, 4 hours estimated
		5131.7378 mg/l, 4 hours estimated
Oral		
LD50	Rat	6992.0737 mg/kg estimated
Chronic		
Dermal		
LD50	Rabbit	16848.916 mg/kg estimated
Inhalation		
NOEL	Rat	18022.3203 ppm, 90 days estimated
Subchronic		
Inhalation		
LC50	Rat	67395.6641 ppm, 90 days estimated

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes eye irritation.
Respiratory sensitization	Not available.

Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product contains a substance which is damaging to the ozone layer.

Product		Species	Test Results
HV Switchgear Lubricant			
Fish	LC50	Fish	302.2171 mg/l, 96 hours estimated
Acute			
Crustacea	EC50	Daphnia	3706.7615 mg/l, 48 hours estimated
Components		**Species**	**Test Results**
Polydimethylsiloxane (CAS 63148-62-9)			
Aquatic			
Fish	LC50	Channel catfish (Ictalurus punctatus)	2.36 - 4.15 mg/l, 96 hours
Trans-1,2-dichloroethylene (CAS 156-60-5)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	220 - 290 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	135 mg/l, 96 hours

Persistence and degradability This product is not biodegradable.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

1,1,1,2-Tetrafluoroethane	1.274
HCFC-225ca	3.2
HCFC-225cb	3.1
Trans-1,2-dichloroethylene	2.09

Mobility in soil No data available.

Other adverse effects Not available.

13. Disposal considerations

Disposal of waste from residues / unused products The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Consult authorities before disposal. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

Hazardous waste code Not regulated.

Contaminated packaging Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, limited quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Not available.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, limited quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	2L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

HCFC-225ca (CAS 422-56-0)
HCFC-225cb (CAS 507-55-1)

CERCLA Hazardous Substance List (40 CFR 302.4)

Trans-1,2-dichloroethylene (CAS 156-60-5)

CERCLA Hazardous Substances: Reportable quantity

Trans-1,2-dichloroethylene (CAS 156-60-5)	1000 lbs

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US CAA Section 602 Ozone-Depleting Substances: Controlled substance Class

HCFC-225ca (CAS 422-56-0)	II
HCFC-225cb (CAS 507-55-1)	II

HCFC-225ca/cb is a Class II Ozone Depleting Substance subject to use and sales restrictions. See 40 CFR Part 82.70 for a description of the acceptable uses for this product.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
No

US state regulations

US. New Jersey RTK - Substances: Listed substance

HCFC-225ca (CAS 422-56-0)
HCFC-225cb (CAS 507-55-1)
Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Massachusetts RTK - Substance List

Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Pennsylvania RTK - Hazardous Substances

Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Rhode Island RTK

HCFC-225ca (CAS 422-56-0)
HCFC-225cb (CAS 507-55-1)
Trans-1,2-dichloroethylene (CAS 156-60-5)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 07-15-2013

Revision date 03-20-2014

Prepared by Allison Cho

Version # 02

Further information CRC # 716

HMIS® ratings
Health: 2
Flammability: 0
Physical hazard: 1
Personal protection: B

NFPA ratings
Health: 2
Flammability: 0
Instability: 1

Disclaimer
The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **HV Switchgear Lubricant**

Product Number (s): **02060, 72060**

Product Use: lubricant for high voltage switch gear

Manufacturer / Supplier Contact Information:

In United States:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300 (General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:
CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:
CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

ACKLANDS GRAINGER

Emergency Overview

WARNING: Vapor Harmful. Contents Under Pressure
Appearance & Odor: translucent white liquid with slight ethereal odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause eye irritation.

SKIN: May cause skin irritation. Extended exposure may cause dermatitis.

INHALATION: Vapors may cause central nervous system depression. Inhalation of high concentrations could cause dizziness, unconsciousness, heart effects, liver effects and possibly death.

INGESTION: May cause irritation to gastrointestinal tract. Low degree of oral toxicity. May be hazardous if aspirated into lungs.

CHRONIC EFFECTS: Unknown

TARGET ORGANS: possible liver effects

Medical Conditions Aggravated by Exposure: Unknown

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	422-56-0	20 – 25
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	507-55-1	25 – 30
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	35 – 45
Trans-1,2-dichloroethylene	156-60-5	5 – 10
Silicone compounds	63148-62-9	5 - 10

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do not induce vomiting as the hazard of aspirating the material into the lungs is considered greater than swallowing it. Consult a physician.

Note to Physicians: Treat symptomatically

ACKLANDS GRAINGER

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable in accordance with aerosol flammability definitions (16 CFR 1500.3(c)(6)). This product does not exhibit a flame extension or flashback. However, this product should not be sprayed directly on energized electrical equipment as an arc flash may be possible under certain conditions.

Flash Point:	None (TCC)	Upper Explosive Limit:	ND
Autoignition Temperature:	ND	Lower Explosive Limit:	ND

Fire and Explosion Data:

Suitable Extinguishing Media: As appropriate for combustibles in the area.

Products of Combustion: Oxides of carbon, silicone and chlorinated by-products. At temperatures above 570°F / 299°C, this product can decompose to form hydrogen fluoride (HF), but HF will only accumulate with continuous exposure to excessive heat in a sealed vessel.

Explosion Hazards: Containers, when exposed to heat from fire, may build pressure and rupture.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Avoid inhaling vapors.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Provide adequate ventilation for storage, handling and use, especially for enclosed or low spaces. Avoid contact of liquid with skin and eyes. Do not allow product to contact open flame because dangerous decomposition products may form. Do not use directly on energized equipment. Equipment can be safely re-energized after about 2 minutes. For full product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing.

Aerosol Storage Level: I

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Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
HCFC-225ca	NE	NE	NE	NE	50	mfr	ppm
HCFC-225cb	NE	NE	NE	NE	400	mfr	ppm
1,1,1,2-Tetrafluoroethane (HFC-134a)	NE	NE	NE	NE	1000	AIHA	ppm
Trans-1,2-dichloroethylene	NE	NE	200	NE	200	mfr	ppm
Silicone compounds	NE	NE	NE	NE	NE		
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as Viton. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: translucent white
Odor: slight ethereal
Odor Threshold: ND
Specific Gravity: 1.45
Initial Boiling Point: 118° F / 48°C
Freezing Point: - 204° F / -131°C
Vapor Pressure: ND
Vapor Density: 7 (air = 1)
Evaporation Rate: fast
Solubility: negligible
Coefficient of water/oil distribution: approx 3.15
pH: NA

Volatile Organic Compounds:							
	Federal:	wt %:	6	g/L:	87	lbs./gal:	0.72
	CARB:	wt %:	54	g/L:	783	lbs./gal:	6.5

Section 10: Stability and Reactivity

ACKLANDS GRAINGER

Stability: Stable

Conditions to Avoid: open flames, high temperature

Incompatible Materials: Alkali or alkaline earth metals such as powdered aluminum, zinc, beryllium, etc.

Hazardous Decomposition Products: Oxides of carbon, silicone, and chlorinated by-products. This compound can be decomposed by high temperature (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, possibly carbonyl halides.

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
HCFC-225ca	> 5 g/kg	> 2 g/kg	37,300 ppm / 4H
HCFC-225cb	> 5 g/kg	> 2 g/kg	36,800 ppm / 4H
1,1,1,2-Tetrafluoroethane (HFC-134a)	No data	No data	1500 g/m^3/ 4H
Trans-1,2-dichloroethylene	1235 mg/kg	> 5 g/kg	24,100 ppm / 4H
Silicone compounds	No data	No data	No data

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
HCFC-225ca	no	no	no	no	no
HCFC-225cb	no	no	no	no	no
1,1,1,2-Tetrafluoroethane (HFC-134a)	no	no	no	no	unknown
Trans-1,2-dichloroethylene	no	no	no	mild (S) / moderate(E)	unknown
Silicone compounds	no	no	no	no	unknown

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: None known
Teratogenicity: Testing of HCFC-225ca/cb and trans-1,2-dichloroethylene indicates that the compounds are not teratogenic.
Mutagenicity: HCFC-225ca/cb do not produce genetic damage in bacterial cell cultures (Ames Assay).
Synergistic Effects: No data available.

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: HCFC-225ca – LC50: 83.5 mg/L/48H (Oryzias latipes)
Trans-1,2-dichloroethylene – LD50: 135 mg/L/96H (Lepomis marcrochirus) static
Persistence / Degradability: This product is not biodegradable.
Bioaccumulation / Accumulation: Not determined
Mobility in Environment: Highly volatile, will partition rapidly to air

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Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is not a hazardous waste if it is unused. Spent liquid, when used is a solvent, is a hazardous waste with a waste code of F001. (See 40 CFR Part 261.20 – 261.33) Aerosol containers should be fully emptied and depressurized before disposal. Empty containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Aerosols, non-flammable, UN1950, 2.2, Limited quantity

ICAO/IATA (air): Aerosols, non-flammable, UN1950, 2.2, Limited quantity

IMO/IMDG (water): Aerosols, non-flammable, UN1950, 2.2, Limited quantity

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: Trans-1,2-dichloroethylene (1000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	No
Reactive Hazard	No
Release of Pressure	Yes
Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
HCFC-225ca (< 25%), HCFC-225cb (< 30%)

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Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None

Occupational Safety and Health Administration:
This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: Not regulated. Specific use lubricant.

State Right to Know:

New Jersey:	422-56-0, 507-55-1, 156-60-5
Pennsylvania:	156-60-5
Massachusetts:	156-60-5
Rhode Island :	156-60-5

Canadian Regulations:

Controlled Products Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Product Regulation and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

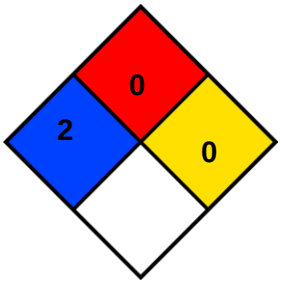
RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: HCFC-225ca/cb is a Class II Ozone Depleting Substance subject to use and sales restrictions. See 40 CFR Part 82.70 for a description of the acceptable uses for this product.

Section 16: Other Information

HMIS® (II)	
Health:	**2**
Flammability:	**0**
Reactivity:	**0**
PPE:	**B**

NFPA



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 716
Revision Date: 09/20/2011

Changes since last revision: part # added

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose
NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System

SAFETY DATA SHEET

1. Identification

Product identifier **RTV Silicone Sealant - Clear (pressurized)**

Other means of identification

Product code 14055

Recommended use Sealant and adhesive

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)
703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Contains gas under pressure; may explode if heated. Causes skin irritation. Causes eye irritation. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Wash hands thoroughly after handling. Wear protective gloves. Avoid release to the environment.

Response If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.

Disposal Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

When heated to temperature above 300°F/150°C in the presence of air, product may form formaldehyde vapors. When exposed to water or humid air, product evolves acetic acid (HOAc).

97.2% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 97.2% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Polydimethylsiloxane, hydroxy-terminated		70131-67-8	>= 70
Amorphous silica		7631-86-9	7 - 13
Distillates (petroleum), Hydrotreated Middle		64742-46-7	5 - 10
Ethyltriacetoxysilane		17689-77-9	1 - 5
Methyltriacetoxysilane		4253-34-3	1 - 5
Polydimethylsiloxane		63148-62-9	1 - 5
Nitrogen		7727-37-9	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Get medical attention immediately.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention.

Most important symptoms/effects, acute and delayed Irritation of eyes and mucous membranes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water. Dry chemical, CO2, or water spray.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Contents under pressure. During fire, gases hazardous to health may be formed. When heated to temperature above 300°F/150°C in the presence of air, product may form formaldehyde vapors. When exposed to water or humid air, product evolves acetic acid (HOAc).

Special protective equipment and precautions for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Wear self-contained breathing apparatus and protective clothing.

Fire-fighting equipment/instructions In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. In the event of fire, cool tanks with water spray.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Shovel up and place in a container for salvage or disposal. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray nozzle is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Avoid breathing vapor. Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing. Use only in well-ventilated areas. When heated to temperature above 300°F/150°C in the presence of air, product may form formaldehyde vapors. When exposed to water or humid air, product evolves acetic acid (HOAc). Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Keep container closed and store away from water or moisture. Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Distillates (petroleum), Hydrotreated Middle (CAS 64742-46-7)	PEL	5 mg/m3	Mist.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Amorphous silica (CAS 7631-86-9)	TWA	0.8 mg/m3 20 millions of particle

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), Hydrotreated Middle (CAS 64742-46-7)	TWA	5 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Amorphous silica (CAS 7631-86-9)	TWA	6 mg/m3	
Distillates (petroleum), Hydrotreated Middle (CAS 64742-46-7)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Occupational Exposure Limits are not relevant to the current physical form of the product. Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear protective gloves such as: Nitrile. Butyl rubber.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Paste.
Color	Translucent.
Odor	Acetic acid.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	680 °F (360 °C) estimated
Flash point	275 °F (135 °C) Closed Cup estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	4.2 hPa estimated
Vapor density	Not available.
Relative density	1.01
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	500 °F (260 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	< 3 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials. When exposed to water or humid air, product evolves acetic acid (HOAc). When heated to temperature above 300°F/150°C in the presence of air, product may form formaldehyde vapors.
Incompatible materials	Strong oxidizing agents. Moist air. Water, moisture.
Hazardous decomposition products	Carbon oxides. Traces of incompletely burned carbon compounds. Silicone dioxide. Formaldehyde. Metal oxides. Nitrogen oxides (NOx). Sulfur oxides. Chlorine compounds.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.

Inhalation Inhalation of fumes may result in metal fume fever, a flu-like illness with symptoms of metallic taste, fever and chills, aches, chest tightness, and cough. Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor concentrations are attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.

Skin contact Causes skin irritation.

Eye contact Causes eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Not available.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Amorphous silica (CAS 7631-86-9)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product		Species	Test Results
RTV Silicone Sealant - Clear (pressurized)			
Fish	LC50	Fish	511.3231 mg/l, 96 hours estimated

Components		Species	Test Results
Polydimethylsiloxane (CAS 63148-62-9)			
Aquatic			
Fish	LC50	Channel catfish (Ictalurus punctatus)	2.36 - 4.15 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Nitrogen	0.67

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

Hazardous waste code Not regulated.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, limited quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, limited quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	2L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. New Jersey RTK - Substances: Listed substance

Amorphous silica (CAS 7631-86-9)
Nitrogen (CAS 7727-37-9)

US. Massachusetts RTK - Substance List

Amorphous silica (CAS 7631-86-9)
Distillates (petroleum), Hydrotreated Middle (CAS 64742-46-7)
Nitrogen (CAS 7727-37-9)

US. Pennsylvania RTK - Hazardous Substances

Amorphous silica (CAS 7631-86-9)
Distillates (petroleum), Hydrotreated Middle (CAS 64742-46-7)
Nitrogen (CAS 7727-37-9)

US. Rhode Island RTK

None.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) < 3 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Sealant and Caulking Compound. This product is compliant for use in all 50 states.

VOC content (CA) < 3 %

VOC content (OTC) < 3 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 12-04-2013

Prepared by Allison Cho

Version # 01

Further information	Not available.
HMIS® ratings	Health: 1 Flammability: 1 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 1 Flammability: 1 Instability: 0
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **RTV Silicone Clear (pressurized)**

Product Number (s): **14055, 74055**

Product Use: Sealant & Adhesive

Manufacturer / Supplier Contact Information:

In United States:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300 (General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:
CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:
CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

WARNING: Contents Under Pressure. Uncured Product May Irritate Eyes.
As defined by OSHA's Hazard Communication Standard, this product is non-hazardous.
Appearance & Odor: Clear paste, acetic acid odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: Direct contact may cause moderate irritation.

SKIN: May cause moderate irritation.

INHALATION: Irritates respiratory passages very slightly.

INGESTION: No significant effects expected from a single short term exposure.

CHRONIC EFFECTS: Unknown

TARGET ORGANS: Unknown

Medical Conditions Aggravated by Exposure: Unknown

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hydroxy-terminated polydimethylsiloxane	70131-67-8	60 - 75
Silica, amorphous	7631-86-9	10 - 15
Ethyltriacetoxysilane	17689-77-9	< 5
Methyltriacetoxysilane	4253-34-3	< 5
Nitrogen	7727-37-9	5

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove from skin and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: No first aid should be needed.

Note to Physicians: Treat according to person's condition and specifics of exposure.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is non-flammable according to OSHA definitions.

Flash Point:	None	Upper Explosive Limit:	ND
Autoignition Temperature:	ND	Lower Explosive Limit:	ND

Fire and Explosion Data:

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Dry chemical, foam or water spray may be appropriate.

Products of Combustion: Carbon oxides and traces of incompletely burned carbon compounds.

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: For small spills, wipe up or scrape up material and package for disposal. For large spills, ventilate the area with fresh air. If in confined space or limited air

circulation area, clean-up workers should wear appropriate respiratory protection. Final cleaning may require the use of steam, solvents or detergents.

Section 7: Handling and Storage

Handling Procedures: Use adequate ventilation. Product evolves acetic acid when exposed to water or humid air. Avoid eye and skin contact. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: I

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Hydroxy-terminated polydimethylsiloxane	NE	NE	NE	NE	NE		
Silica, amorphous	NE	NE	NE	NE	NE		
Ethyltriacetoxysilane	NE	NE	NE	NE	NE		
Methyltriacetoxysilane	NE	NE	NE	NE	NE		
Nitrogen	NE	NE	NE	NE	NE		
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as Silver Shield® or 4H®. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: paste
Color: clear
Odor: acetic acid odor

Odor Threshold: ND
Specific Gravity: 1.032
Initial Boiling Point: ND
Freezing Point: ND
Vapor Pressure: ND
Vapor Density: ND (air = 1)
Evaporation Rate: slow
Solubility: ND
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: wt %: 3.0 g/L: 31 lbs./gal: 0.259

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Do not expose container to temperature extremes.

Incompatible Materials: Oxidizing material can cause a reaction. Water, moisture or humid air can cause hazardous vapors to form.

Hazardous Decomposition Products: Thermal decomposition of this product during fire or very high heat conditions may evolve the following products: carbon oxides, formaldehyde, hydrogen, silicon dioxide, metal oxides.

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Hydroxy-terminated polydimethylsiloxane	> 15400 mg/kg	> 2 g/kg	> 8750 mg/m^3/7H
Silica, amorphous	No data	No data	No data
Ethyltriacetoxysilane	No data	No data	No data
Methyltriacetoxysilane	2060 mg/kg	No data	No data
Nitrogen	No data	No data	No data

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Hydroxy-terminated polydimethylsiloxane	No	No	No	Unknown	Unknown
Silica, amorphous	No	No	No	E (moderate) / S (moderate)	Unknown
Ethyltriacetoxysilane	No	No	No	Unknown	Unknown
Methyltriacetoxysilane	No	No	No	Unknown	Unknown
Nitrogen	No	No	No	No	Unknown

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available

Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: No information available
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: Dispensed product is a non-hazardous waste. Pressurized containers are a D003 reactive waste. (See 40 CFR Part 261.20 – 261.33)
Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D

ICAO/IATA (air): Consumer Commodity, ID8000, 9

IMO/IMDG (water): Aerosols, UN1950, 2.2, Limited Quantity

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:		
	Fire Hazard	No
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: In states with Consumer Products VOC regulations, this product is compliant as a Sealant and Caulking Compound.

State Right to Know:
New Jersey: 7631-86-9, 7727-37-9
Pennsylvania: 7631-86-9, 7727-37-9
Massachusetts: 7631-86-9, 7727-37-9
Rhode Island : 7727-37-9

Canadian Regulations:

Controlled Products Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

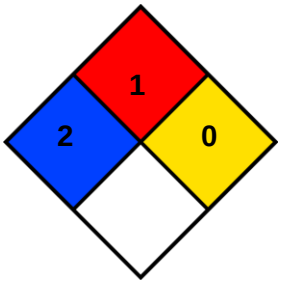
RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	**2**
Flammability:	**1**
Reactivity:	**0**
PPE:	**B**

NFPA



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 14055
Revision Date: 03/27/2012

Changes since last revision: Revision date

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstract Service
CFR:	Code of Federal Regulations
DOT:	Department of Transportation
DSL:	Domestic Substance List
g/L:	grams per Liter
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods
IMO:	International Maritime Organization
lbs./gal:	pounds per gallon
LC:	Lethal Concentration
LD:	Lethal Dose
NA:	Not Applicable
ND:	Not Determined
NIOSH:	National Institute of Occupational Safety & Health
NFPA:	National Fire Protection Association
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PMCC:	Pensky-Martens Closed Cup
PPE:	Personal Protection Equipment
ppm:	Parts per Million
RoHS:	Restriction of Hazardous Substances
STEL:	Short Term Exposure Limit
TCC:	Tag Closed Cup
TWA:	Time Weighted Average
WHMIS:	Workplace Hazardous Materials Information System

Csan 154 QT Hand Soap

GENERAL DESCRIPTION:

Csan 154 QT Hand Soap is a mild liquid cleansing agent approved by the State of Florida for personnel decontamination in the fight against the spread of Citrus Canker disease. Csan 154 QT Hand Soap is easily diluted with fresh water and dispensed in the field. A wide range of package sizes allows for ultimate flexibility and economy.

* A concentrated product – Reduces costs
* Effective cleanser at 2000 ppm –Economical.
* Hard water tolerance -- No reduction in effectiveness.
* Not corrosive to equipment – Eliminates premature equipment replacement.
* Pleasant mild odor.

PHYSICAL PROPERTIES:

Appearance:	clear, straw-colored liquid
Density:	8.24 lbs./gallon
Odor:	mild
Hard water stability:	excellent
% Quaternary ammonium:	14%

DIRECTIONS FOR USE:

Cleansing of Skin: Use 1 gal. Of Csan 154 QT Hand Soap in 54 gallons of water (2000 ppm active). Do not use undiluted product on skin as irritation may occur. Rub 1 tsp. of diluted product onto exposed skin.

General Areas of Use: Cleansing of workers, supervisors and inspectors, fruit receiving areas of processing plants and packing houses.

SAFETY:

Csan 154 QT Hand Soap is safe for kinds of mixing and dispensing equipment.

CAUTION:

Keep out of reach of children. Keep out of eyes, always wear eye protection when diluting or applying this product. Flush eyes thoroughly and seek medical attention if eyes become irritated. Do not ingest; seek medical attention if product is consumed.

154QT: 04/02

BELL CHEM CORP.
MANUFACTURING & DISTRIBUTION
1340 BENNETT DR. • LONGWOOD, FL 32750
PH: (407) 339-2355 • FAX: (407) 767-8685

SAFE CHEM INC.
TECHNICAL SALES & SERVICE
P.O. BOX 1237 • ZELLWOOD, FL 32798
PH: (407) 880-2879 • FAX: (407) 880-1196

Belquat 612

GENERAL DESCRIPTION:

Belquat 612 is a liquid sanitizing agent and germicide approved by the State of Florida for equipment decontamination in the fight against the spread of Citrus Canker disease. Belquat 612 is easily diluted with fresh water and dispensed in the field. A wide range of package sizes allows for ultimate flexibility and economy.

- A concentrated product – Reduces costs
- Effective germicide at 2000 ppm –Economical
- Hard water tolerance – No reduction in effectiveness.
- Not corrosive to equipment – Eliminates premature equipment replacement.
- Pleasant mild odor.

PHYSICAL PROPERTIES:

Appearance	:	clear, straw-colored liquid
Density	:	8.33 lbs./gallon
Odor	:	mild
Hard water stability	:	excellent
% Quaternary ammonium	:	21.7%

DIRECTIONS FOR USE:

Equipment Sanitation: Use 1 gal. Of Belquat 612 diluted with 108 gallons of water (2000 ppm active). Thoroughly soak all equipment entering sensitive areas including undercarriage.
General Areas of Use: Disinfection in groves of trucks, picking equipment and tractors. Disinfection in processing plants of yard tractors, and trailers.

SAFETY:

Belquat 612 is safe to use around personnel

CAUTION:

Keep out of reach of children. Keep out of eyes, always wear eye protection when diluting or applying this product. Flush eyes thoroughly and seek medical attention if eyes become irritated. Do not ingest; seek medical attention if product is consumed.

Belquat 612: 10/00

BELL CHEM CORP.
MANUFACTURING & DISTRIBUTION
1340 BENNETT DR. · LONGWOOD, FL 32750

SAFE CHEM INC.
TECHNICAL SALES & SERVICE
P.O. BOX 1237 · ZELLWOOD, FL 32798

APPROVED DECONTAMINATION PRODUCTS & METHODS

CITRUS HEALTH RESPONSE PROGRAM - COMPLIANCE AGREEMENT ATTACHMENT – SCHEDULE 11

In order to prevent the spread of citrus diseases, it is essential that personnel and equipment working near or contacting any citrus plant material be decontaminated in accordance with Citrus Health Response Program rules, with an approved material, regardless of whether an infestation has been proven to exist. Risks of acquiring and dispersing citrus diseases such as citrus canker bacterial inoculum and the black spot fungal pathogen are greatest when diseased citrus plant material and surrounding vegetation are wet. Avoid any unnecessary contact with citrus.

DECONTAMINATION **of personnel and equipment** are required procedures to be carried out by the terms set forth within each Citrus Health Response Program Compliance Agreement under authority of Chapter 581.184 (6), Florida Statutes and Rule Chapter 5B-63, F.A.C. The following steps meet minimum standards for most regulated entities. Citrus nurseries have additional requirements.

1 Prior to departing a citrus grove or citrus production unit, a citrus receiving facility, or a disposal site, all personnel must **inspect** vehicles and equipment for citrus plant material and debris **and clean** all vehicles, equipment, picking sacks, clothing and hand tools free of fruit, limbs, leaves, soil and debris prior to bacterial decontamination. This plant material and debris must be left on the property or be disposed of in accordance with established Citrus Health Response Program procedures.

2 All personnel, vehicles and equipment (picking sacks, hand tools, etc.) must be decontaminated by an appropriate sanitizing method in accordance with *Approved Decontamination Products & Methods* (Schedule 11).

It is important that all users of approved products in this listing always READ AND FOLLOW THE PRODUCT LABEL. Please note that no single antimicrobial product is approved for use interchangeably on both personnel and equipment. In addition to grove and harvesting equipment and vehicles, citrus fruit picking sacks and clippers must also be disinfected with an approved equipment decontaminant listed in this document under, "DECONTAMINATION OF EQUIPMENT."

DECONTAMINATION OF PERSONNEL: All persons should disinfect hands, arms and any other parts of the body that have contacted citrus and surrounding vegetation, **plus** gloves and hats, and any clothing, shoes and small personal items (pen, hand lens, glasses, pocketknife, etc.) that have come in contact with risky plant material, using one of the following prescribed products in accordance with label directions. (Larger equipment and worker accessories associated with harvesting operations should be treated with the products described in the EQUIPMENT section below.) Some personnel decontaminants are one-step no-rinse products, which are listed below under the heading, "PERSONNEL DECONTAMINANTS for use on Clothing AND Skin," and can be applied to clothing while being worn, in addition to skin. Other personnel decontaminants, which are listed below under the heading, "PERSONNEL DECONTAMINANTS for use ONLY on Skin," are approved for skin use only, requiring a follow-up water rinse, or soap and water hand-washing BEFORE use of the product. When using these materials, allow the no-rinse products to air-dry. For thorough decontamination of hands, use normal hand washing action for 20 to 30 seconds, paying special attention to fingernails and areas between fingers. Products marked with '*' are in a formulation that can be applied to clothing and shoes using a spray dispenser. With all products, avoid contact with eyes, and observe product safety precautions given by the manufacturer. It is important that the users of any of these products always READ AND FOLLOW THE LABEL DIRECTIONS.

PERSONNEL DECONTAMINANTS **for use on Clothing AND Skin:**

1. *** GX-1027 Antimicrobial Soap**	Galloway Chemical	(800) 445-1143
2. *** Canker Guard**	Flo Tech. Inc.	(800) 335-6832
3. *** Csan 154 QT Soap**	Bell Chem Corporation	(866) 877-2355
4. *** EcoCare 360**	Ecolab	(651) 293-2233
5. *** Medi-Kwik AntiMicrobial & Fungicidal Skin Cleanser**	(by Envirosafe, Inc.)	No Contact Available
6. *** Triple Crown Super Healer**	(by Envirosafe, Inc.)	No Contact Available
7. *** QHS Quaternary Hand Sanitizer** (by Chemstar Products, Inc.)	Stepan Co.	(800) 457-7673
8. *** C-Soap**	Agri Flow	(863) 381-2628

PERSONNEL DECONTAMINANTS **for use ONLY on Skin:**

A. Hibiclens (by SSL)	Medco Sports	(800) 55medco
B. Hibistat (by SSL) (wholesale only)	Medco Sports	(800) 55medco
C. EcoCare 250	Ecolab	(651) 293-2233
D. EcoCare 350 (alcohol-base / no rinse)	Ecolab	(651) 293-2233
E. FS Antimicrobial Hand Cleaner; FS E-2 Sanitizing Hand Soap	ZEP Manufacturing Co.	(800) 313-8439
F. Acclaim Antibacterial Liquid Hand Soap	ZEP Manufacturing Co.	(800) 313-8439
G. Nobac Instant Foam Hand Sanitizer	Mason Chemical Co.	(800) 362-1855
H. Zep Foam San	(by Zep Manufacturing Co.)	Product Discontinued
I. Zep Foamy Sanz	Zep Manufacturing Co.	(800) 313-8439
J. Selig Foaming Hand Sanitizer	Selig Industries	(800) 447-3544
K. Selig Perfect Touch	Selig Industries	(800) 447-3544

APPROVED DECONTAMINATION PRODUCTS & METHODS

CITRUS HEALTH RESPONSE PROGRAM - COMPLIANCE AGREEMENT ATTACHMENT – SCHEDULE 11

PERSONNEL DECONTAMINANTS **for use ONLY on Skin:** (continued)

L. QS Plus	(non-alcohol hand sanitizer)	Aero Chemical Co.	(800) 795-9222

DECONTAMINATION OF EQUIPMENT: Equipment and vehicle surfaces (including undercarriages) should be regularly inspected for freedom from plant debris and soil residue, pressure washed with detergent, and then further disinfected with any of the following approved equipment decontamination materials applied to all surfaces to the point of runoff. Recommended contact time for all listed chemical decontaminants is ten minutes. Although use of equipment decontaminants on personnel is prohibited, fruit picking sacks and clippers must be cleaned and then disinfected with one of these Equipment Decontamination Materials. Where skin sensitivity is of concern, these articles may be immersed in prescribed QAC or chlorine solutions for ten minutes, and then rinsed in clean water prior to use. Since the following QAC decontamination materials are not labeled for use on fruit or personnel, it is recommended that care be taken to avoid contact with exposed fruit and personnel when applying these products. It is important that the users of these products always READ AND FOLLOW THE LABEL DIRECTIONS.

Please note that as of the revision date of this document, USDA/ APHIS has listed only the following approved materials for the decontamination of equipment exposed to citrus fruit or plant material originating from citrus black spot and sweet orange scab quarantined areas:

1. **Sodium hypochlorite solution at 200 ppm with pH of 6.0 – 7.5; or**
2. **Quaternary ammonium chloride (QAC) compound at 0.2 percent solution; or**
3. **Peroxyacetic acid (PAA) solution at 85 ppm PAA (indoor use only).**

Quaternary Ammonium Chloride 'QAC': The use of these compounds is recommended for vehicles, tools and equipment. **Do not use on personnel.** Apply all QAC products at 2000 ppm (0.2%) QAC solution to all equipment surfaces to the point of runoff (dilution ratio 1:108). Recommended contact time is 10 minutes. The following QAC products are approved for use in the decontamination of equipment, and carry EPA Section 3 registrations:

1.	**CITRA-SOLV/ CANKER-SOLV**	EPA Reg.No. 10324-72-72160.	(by FLO-TEC Inc.)		Product Discontinued
2.	**CS-170-C**	EPA Reg.No. 10324-72-44637.	(by Chem. Systems, FL)	FLO-TEC Inc.	(800) 335-6832
3.	**Canquat 110c**	EPA Reg.No. 10324-72-33354.		Fresh Mark Corporation	(352) 429-4171
4.	**Canquat 108**	EPA Reg.No. 1839-167-33354.		Fresh Mark Corporation	(352) 429-4171
5.	**BELQUAT 612**	EPA Reg.No. 10324-72-67829.		Bell Chem Corporation	(866) 877-2355
6.	**SAN-O-128**	EPA Reg.No. 10324-155-402.		Hill Manufacturing Co.	(800) 445-5123
7.	**ZEP X-1400**	EPA Reg.No. 10324-72-1270.		(by ZEP Manufacturing)	Product Discontinued
8.	**DECCOSAN 321**	EPA Reg.No. 10324-72-2792.		Decco Cerexagri, Inc.	(800) 237-2591
9.	**CPF QUAT**	EPA Reg.No. 10324-72-9367.		Theochem Laboratories, Inc.	(800) 237-2591
10.	**HDQ-22 High Dilution Quat**	EPA Reg.No. 1839-167-70671.	(by Chemstar Products)	Stepan Co.	(800) 457-7673
11.	**Canker Control Concentrate**	EPA Reg.No. 1839-167-22061.	(by Galloway Chemical)		Product Discontinued
12.	**C-Quat**	EPA Reg.No. 10324-72-73439.	(by Genesis Technologies)		No Contact Available
13.	**J & J Disinfectant Spray**	EPA Reg.No. 10324-72-32981.		J & J Chemical Co.	(800) 345-3303
14.	**Canker-Solv (neutral pH)**	EPA Reg.No. 10324-108-72160	(by FLO-TEC Inc.)		Product Discontinued
15.	**Canker-Solv Reduced Corrosion**	EPA Reg.No. 10324-109-72160.		FLO-TEC Inc.	(800) 335-6832
16.	**AP Neutral Disinfectant Cleaner**	EPA Reg.No. 1839-167-74709.		APCO Equipment & Supply	(863) 648-9774
17.	**Microdyne Extra**	EPA Reg.No. 10324-72-74098.		Eurochem International	(404) 696-9867
18.	**C-Quat Plus**	EPA Reg.No. 10324-72-73439.	(by Genesis Technologies)		No Contact Available
19.	**CANKERQUAT**	EPA Reg.No. 1839-167-6428.	(by International Chemical)		Discontinued/ No Contact Available
20.	**HDH Quat 108**	EPA Reg.No. 1839-167-83103		HDH Agri Products LLC	(352) 343-3484

ALTERNATIVE METHODS FOR DECONTAMINATION OF EQUIPMENT:

(A) Peracetic Acid: Only approved formulations may be used, only with injection systems, and may only be used on equipment including food contact surfaces. Rinsing is not required if used in accordance with product label. This material must be applied to reasonably clean equipment, follow label instructions for ratio. The following products are approved for use in decontamination of equipment, and carry EPA Section 3 registration:

1) **VigorOx Citrus XA**	EPA Reg. No. 65402-6.	FMC Fresh Produce Technologies	(800) 845-0187
2) **VigorOx XA-15**	EPA Reg. No. 65401-3.	FMC Fresh Produce Technologies	(800) 845-0187
3) **Peroxy-Solv**	EPA Reg. No. 72160-1.	FLO-TEC Inc.	(800) 335-6832
4) **JET-Oxide**	EPA Reg. No. 54289-3-81803	JET Harvest Solutions	(877) 866-5773
5) **Peraclean 5**	EPA Reg. No. 54289-3	A Growing Alternative, Inc.	(828) 766-6179

APPROVED DECONTAMINATION PRODUCTS & METHODS

CITRUS HEALTH RESPONSE PROGRAM - COMPLIANCE AGREEMENT ATTACHMENT – SCHEDULE 11

ALTERNATIVE METHODS FOR DECONTAMINATION OF EQUIPMENT: (continued)

(B) Hydrogen Peroxide Products: Only approved formulations may be used, only with injection systems, and may only be used on equipment, including food contact surfaces. Rinsing is not required if used in accordance with product label. This material must be applied to reasonably clean equipment, at CHRP-approved ratio indicated. The following product is approved for use in decontamination of equipment, and carries EPA Section 3 registration:

1)	**OxiDate** Dilution ratio 1:200	EPA Reg. No. 70299-2.	BioSafe Systems	(888) 273-3088
2)	**Oxyfresh** Dilution ratio 1:200	EPA Reg. No. 33354-18	Fresh Mark Corporation	(352) 429-4171
3)	**HDH Peroxy** Dilution ratio 1:200	EPA Reg. No. 83103-1	HDH Agriproducts LLC	(352) 343-3484
4)	**Di-Oxy Solv Organic** Dilution ratio 1:200	EPA Reg. No. 72160-2	Flo-Tec Inc.	(800) 335-6832

(C) Copper-based products: Only approved formulations may be used, and only on equipment, vehicles, tools, clothing and shoes. Not for use on skin. This material must be applied to reasonably clean equipment at CHRP-approved ratio indicated. Dilute with clean water with the pH adjusted to <7.0 before mixing. The following product is approved for use in decontamination of equipment, and carries EPA Section 3 registration:

1)	**Eradicator** Dilution ratio 1:1000	EPA Reg. No. 66675-4.	The New Magna-Bon Corp.	(863) 357-0400

(D) Household Bleach (Chlorine) or Commercial Hypochlorite Products: A solution for decontamination of tools and equipment can be made using household bleach or other more concentrated hypochlorite products. Apply 200 ppm available chlorine to all surfaces to the point of run-off and maintain a pH of 6.0 to 7.5. Most solutions made with 1 ounce of household bleach to 1 gallon of water meet these criteria. This solution loses its strength rapidly, and should be made fresh daily. Bleach is not an effective decontaminant if used on dirty equipment.

(E) Hot Water and Detergent: Wash thoroughly with a hot water and detergent solution, under high pressure, at a minimum of 160 degrees F, covering all surfaces to the point of runoff.

(F) Steam: Apply steam, with minimum temperature of 160 degrees F, to all surfaces. This temperature must be maintained at the point of contact. Note: It has been proven to be extremely difficult to maintain the 160 degree F temperature in actual use. Applying steam with a combination of dry heat in an enclosed chamber has been successful.

Spectrum
Division of United Industries Corp.
P.O. Box 142642
St. Louis, MO 63114-0642

Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200

Hazardous Material Identification System-(HMIS)	
HEALTH - 2	REACTIVITY - 0
FLAMMABILITY - 2	PERSONAL - None

I Trade Name: Unscented Cutter Insect Repellent

Product Type: Insect Repellent Aerosol

Product Item Number: 51020 **Formula Code Number:** 21-0368

EPA Registration Number	Manufacturer	Emergency Telephone No.
121-65	Chemsico 8494 Chapin Industrial Dr. St. Louis, MO 63114	**For Chemical Emergency:** 1-800-633-2873 **For Information:** 1-800-767-9927 **Prepared by:** H.L. Pauls **Date Prepared:** October 18, 2010

II Hazardous Ingredients/Identity Information

Chemical	%	OSHA PEL	ACGIH TLV
N,N-diethyl-m-Toluamide (DEET) CAS #134-62-3	10	NA	NA
SDA-40 Ethanol CAS #64-17-5	37	NA	1000 ppm
Isobutane CAS #75-28-5	10	NE	NE

III Physical and Chemical Characteristics

Appearance and Odor: Cloudy liquid with ethanollic odor.
Boiling Point: 85°C
Vapor Pressure: 90 psig @ 54°C (130°F)
Specific Gravity: 0.93 @ 72°F (H_20=1)
Vapor Density: 1.8
% Volatile (by vol.): 89
Solubility in Water: Greater than 81%
Evaporation Rate: Approx. 1 (BuOAc=1)

IV Fire and Explosion Hazard Data

Flash Point: 65°F (Closed Cup)
Flame Extension: 12" (Level 1 Aerosol)
Flammable Limits: Lower: 3.3% **Upper:** 19.0%
Autoignition Temp.: 793°F
Fire Extinguishing Media: CO_2, Foam, or Dry Chemical
Decomposition Temp.: N/A
Special Fire-Fighting Procedures: **For small fires:** Use CO_2 or dry chemical extinguisher. **For large fires:** Use copious amounts of water.
Unusual Fire and Explosion Hazards: See section VII

V Reactivity Data

Stability: Stable
Polymerization: Will not occur
Conditions to Avoid: None
Incompatible Materials: May soften or damage some synthetics such as rayon. May damage leather.
Hazardous Decomposition or Byproducts: None

VI Health Hazard Data

Ingestion (Swallowing): Harmful if swallowed. **First Aid:** Consult a physician or poison control. Drink 1 or 2 glasses of water & induce vomiting by touching the back of the throat with finger. **Do not** induce vomiting or give anything by mouth to an unconscious person.
Eye Contact: May cause eye irritation. **First Aid:** Flush eyes with plenty of water. Get medical attention.
Skin Contact: If skin reaction occurs, wash with soap and water. Get medical attention if irritation persists.
Inhalation Toxicity: Avoid breathing spray mist or using in enclosed areas.
Special Notes: Apply only to skin or clothing, do not ingest. Keep out of eyes. Frequent reapplication or saturation is unnecessary.
Health Conditions Aggravated by Exposure: None Known
Ingredients listed by NTP, OSHA or IARC as Carcinogens or potential carcinogens: None

VII Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled:
Flammable material. Remove all possible ignition sources. Wipe up with absorbent material. Wash small quantities away with soapy water. Prevent bulk quantities from entering open sewers and waterways.

Waste Disposal:
This material is flammable and must be disposed of in accordance with Local, State and Federal regulations. Do not puncture or incinerate empty container; dispose of properly.

Handling & Storage Precautions:
Keep away from heat, sparks or open flame. Do not expose treated skin to fire sparks or flame until liquid has dried.

VIII Control Measures

Read and follow label directions. They are your best guide to using this product effectively, and give necessary safety precautions to protect your health.

IX Transportation Data

DOT: Consumer Commodity, ORM-D, UN-1950
IMDG: UN-1950, Aerosols, 2.1
IATA: Un-1950, Aerosols, Flammable, 2.1

The information and statements herein are believed to be reliable but are not to be construed as warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

MATERIAL SAFETY DATA SHEET

Revised: 10-02-02

SECTION I - IDENTIFICATION OF PRODUCT

MANUFACTURER'S NAME:	CONTROL SOLUTIONS, INC 5903 Genoa-Red Bluff Pasadena, TX 77507-1041
PRODUCT NAME:	Cyper TC Insecticide
	EPA REGISTRATION NO. 53883-92 EPA EST. NO. 53883-TX-002
Emergency Phone:	(281) 892-2500
CHEMICAL NAME:	See Section VI
C.A.S. NAME:	See Section VI
C.A.S. NUMBER:	See Section VI
CHEMICAL FORMULA:	See Section VI
MOLECULAR WEIGHT:	N/A
CHEMICAL FAMILY:	Synthetic Pyrethroid Insecticide
D.O.T. HAZARD CLASS:	N/A
D.O.T. SHIPPING NAME:	Insecticide Liquid O/T Agriculture N.O.I.B.N.

SECTION II - PHYSICAL DATA

ODOR:	Aromatic Solvent	MELTING POINT:	N/E
APPEARANCE:	liquid	PARTICLE SIZE:	N/A
LBS/GAL:	7.86	CLOUD PT:	N/A
COLOR (G-H):	Dark Amber	PERCENT VOLATILE:	N/E
BOILING POINT:	N/E	EVAPORATION RATE:	N/E
VAPOR PRESSURE:	N/E	FLASH POINT:	164° F
VAPOR DENSITY:	N/E	SPECIFIC GRAVITY:	0.945 (25° C)
BULK DENSITY (FLUFFED):	N/A	BULK DENSITY (SETTLED):	N/A
REFRACTIVE INDEX:	N/E	pH:	3.98 (1% solution)
SOLUBILITY (OIL):	N/A	SOLUBILITY (WATER):	Emulsifiable

SECTION III - FIRE & EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED):	164°F (Setn Closed Cup)
FLAMMABLE LIMIT (LOWER):	N/E
FLAMMABLE LIMIT (UPPER):	N/E
FIRE EXTINGUISHING MEDIA:	Foam, carbon dioxide, dry chemical & water fog.
SPECIAL PROCEDURES:	Use self-contained breathing apparatus. Cool fire exposed areas and equipment.
UNUSUAL FIRE/EXPLOSION HAZARDS:	None known.

SECTION IV - HEALTH HAZARD DATA

TOXICITY CATEGORY:	"WARNING" label required
ORAL LD_{50}:	> 1000 mg/kg
DERMAL LD_{50}:	> 2000 mg/kg
INHALATION LC_{50}:	> 10 mg/L
EYE EFFECTS:	Slight Irritant
SKIN EFFECTS:	Slight Irritant
THRESHOLD LIMIT VALUE:	N/E
ADDITIONAL COMMENTS:	May causes slight skin and eye irritation. Do not get in eyes, on skin or on clothing. Harmful if swallowed, absorbed through skin or inhaled. Avoid breathing spray mist.

SECTION V - SPECIAL PROTECTION

EYE PROTECTION:	Avoid contact - Wear goggles, face shield or safety glasses.
SKIN PROTECTION:	Avoid contact - Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.
RESPIRATORY PROTECTION:	Avoid breathing spray mist.
OTHER PRECAUTIONS:	Do not use or store near heat or open flame. Do not apply diluted product in conduits, motor housings, junction and switch boxes or other electrical equipment because of possible shock hazard.

SECTION VI - COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL		PERCENT
Cypermethrin (±) α - cyano-(3-phenoxyphenyl) methyl (±) cis, trans-3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate. Cis/trans ratio: 47/53(±)10.	CAS #52315-07-8	25.4%
Inert Ingredients		74.6%

SECTION VII - HAZARDOUS COMPONENTS OF MIXTURES

MATERIAL		PERCENT
Cypermethrin (±) α - cyano-(3-phenoxyphenyl) methyl (±) cis, trans-3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate. Cis/trans ratio: 47/53(±)10.	CAS #52315-07-8	25.4%

SECTION VII - EMERGENCY & FIRST AID PROCEDURES

IF SWALLOWED:	Do not induce vomiting. Call a physician or Poison Control Center. Do not give anything by mouth to an unconscious person.
IF IN EYES:	Flush eyes with plenty of water. Call a physician.
IF ON SKIN:	Wash with plenty of soap and water. Get medical attention if irritation persists.
IF INHALED:	Remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. Get medical attention.
NOTE TO PHYSICIAN:	Inducing vomiting as first aid for this substance may result in increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent. Vomiting should be induced only under professional supervision.

SECTION VIII - EFFECTS OF OVER-EXPOSURE

N/E

SECTION IX - SPILLAGE OR LEAKAGE PROCEDURES

In case of spill or leakage, soak up with an absorbent material such as sand, earth or synthetic absorbent. Remove to chemical waste area. Dispose of according to local, state authorities.

SECTION X – STORAGE & DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Open dumping prohibited. Do not reuse empty container.

STORAGE: Keep container closed when not in use. Do not store near food or feed. Protect from freezing. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable Return Containers: Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning.

Container Precautions: Before refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions, and damaged or worn threads on closure devices. REFILL ONLY WITH CYPER TC Insecticide. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than CYPER TC Insecticide will result in contamination and may weaken container.

After filling and before transporting, check for leaks.

Do not refill or transport damaged or leaking containers.

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.

SECTION XI - ADDITIONAL PRECAUTIONS

Environmental Hazards: This product is extremely toxic to fish. Do not contaminate water when disposing of equipment washwaters. Do not apply directly to any body of water, or to any areas where the surface water is present or to intertidal areas below the mean high water mark. Apply this product only as specified on this label. Care should be used when spraying to avoid fish and reptile pets by removing pets and covering fish tanks before spraying.

Product is for Industrial/Institutional/Commercial Use only.

SECTION XII - COMMENTS

The information contained herein is believed to be accurate whether originating with Control Solutions, Inc. or not. Control Solutions, Inc. provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data. Recipients are advised to confirm any data, in advance of need, that it is current, applicable and suitable to their circumstances.

N/E = Not Established N/A = Not Applicable

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: DAILY MOP

PRODUCT CODE: PK 1105

GENERAL USE: Cleaning agent

PRODUCT DESCRIPTION: Light yellow clear liquid, lemon odor

PowerKleen
Quality Chemicals • Superior Service

MANUFACTURER'S NAME Power Kleen Corporation	DATE PREPARED: May 26, 2008 SUPERSEDES: June 30, 2001	Page 1 of 4
ADDRESS (NUMBER, STREET, P.O. BOX) 101 Bayview Blvd	TELEPHONE NUMBER FOR INFORMATION (813) 854-2648	
(CITY, STATE AND ZIP CODE) COUNTRY Oldsmar, FL 34677 USA	EMERGENCY TELEPHONE NUMBER ChemTel Inc. 1- (800) 255-3924 Intl. + 01 (813) 248-0585	

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Mild liquid, prolonged contact may cause skin & eye irritation. Ingestion may cause gastric distress. Hazard Symbols for this product - None. Risk Phrases - Not classified

POTENTIAL HEALTH EFFECTS

INHALATION: None expected, however, certain individuals may experience minor nausea or headaches.

SKIN: None expected, however, prolonged contact may cause irritation.

EYES: Contact with eyes may cause irritation.

INGESTION: May cause gastric distress, vomiting and diarrhea.

CARCINOGENICITY NTP? No IARC MONOGRAPHS? No OSHA REGULATED? No

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	EINECS #	% (by weight)	OSHA PEL PPM	OSHA PEL MG/M3	ACGIH TWA PPM	ACGIH TWA MG/M3	RQ LBS
No hazardous materials present as defined by OSHA - 29 CFR 1910.1000; EPA - 40 CFR 260 - 281, 302, 355, 370, 372; DOT - 49 CFR 172; WHMIS or EC Directive 91 / 155 / EEC.								

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; if symptoms persist seek medical attention.

SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

EYES: Check for and remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

INGESTION: Give two glasses of water for dilution; DO NOT induce vomiting; never give anything by mouth to an unconscious person; seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	LEL: Not applicable	UEL: Not applicable
Non-flammable	AUTOIGNITION TEMPERATURE:	Not determined	NFPA CLASS: None

GENERAL HAZARDS: Product is not considered flammable or combustible. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

EXTINGUISHING MEDIA
Carbon dioxide, water, water fog, dry chemical, chemical foam.

FIRE FIGHTING PROCEDURES
Keep containers cool with water spray to prevent container rupture due to steam buildup; floor will become slippery if material is released.

UNUSUAL FIRE AND EXPLOSION HAZARDS
None

HAZARDOUS COMBUSTION PRODUCTS
Smoke, fumes or vapors, oxides of carbon.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Small spills - wash to sanitary sewer with plenty of water. Large spills - soak up with approved absorbent, shovel product into approved container for disposal. Wash area with plenty of water.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS
The use of local exhaust ventilation is recommended. No other special controls are indicated.

PERSONAL PROTECTION:
RESPIRATORY PROTECTION: None required

PROTECTIVE GLOVES: None required

EYE PROTECTION: Safety glasses recommended for general protection Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyewash station nearby.

WORK / HYGIENIC PRACTICES: Practice safe workplace habits.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: DAILY MOP
May 26, 2008

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Light yellow clear liquid, lemon odor	VAPOR DENSITY (AIR = 1) < 1
SPECIFIC GRAVITY (WATER = 1) 1.010	EVAPORATION RATE (Water = 1) > 1
SOLUBILITY IN WATER Complete	% VOLATILE (BY WEIGHT) 95%
pH 7.0	VAPOR PRESSURE 17 mm Hg @ 20° C
BOILING POINT 212° F (100° C)	FREEZING POINT 32° F (0° C)
VISCOSITY Like that of water	VOLATILE ORGANIC COMPOUNDS (VOC's) None

SECTION 10 - STABILITY AND REACTIVITY

STABILITY UNSTABLE: STABLE: X	CONDITIONS TO AVOID: Extreme temperatures, keep from freezing.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.

HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: X	CONDITIONS TO AVOID: None

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD50 of Ingredient Species and Route	LC50 of Ingredient Species
No hazardous materials present as defined by OSHA - 29 CFR 1910.1000; EPA - 40 CFR 260 - 281, 302, 355, 370, 372; DOT - 49 CFR 172; WHMIS or EC Directive 91 / 155 / EEC.				

SECTION 12 - ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Product is classified as non - hazardous, however, non-hazardous materials may become hazardous waste upon contact with other products. Refer to 40 CFR 260 - 299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Non - Hazardous for Transport

DOT HAZARD CLASS / Pack Group: Not regulated	IATA HAZARD CLASS / Pack Group: Not regulated
REFERENCE: Not Applicable	IMDG HAZARD CLASS: Not regulated
UN / NA IDENTIFICATION NUMBER: None	RID/ADR Dangerous Goods Code: Not regulated
LABEL: None Required	UN TDG Class / Pack Group: Not regulated
HAZARD SYMBOLS: None	Hazard Identification Number (HIN): None

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

SECTION 15 - REGULATORY INFORMATION

TSCA (Toxic Substance Control Act)
All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
311/312 Hazard Categories
None

313 Reportable Ingredients:
None

CERCLA (Comprehensive Response Compensation and Liability Act)
None

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986
There are no reportable chemicals present known to the state of California to cause cancer or reproductive toxicity.

CPR (Canadian Controlled Products Regulations)
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: Not controlled

IDL (Canadian Ingredient Disclosure List)
Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 3.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)
Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 3 unless otherwise indicated.

EINECS (European Inventory of Existing Commercial Chemical Substances)
Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

WGK Water Quality Index: nwg VbK Index: Not applicable

Risk Phrases	SYMBOL(S) REQUIRED FOR LABEL	Safety Phrases
Not classified	None	S2 Keep out of the reach of children. S24/25 Avoid contact with skin and eyes.

SECTION 16 - OTHER INFORMATION

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on Information from similar products, the ingredients, technical literature, and/or professional experience.

HMIS HAZARD RATINGS				
	HEALTH	0	* = Chronic Health Hazard	2 = MODERATE
	FLAMMABILITY	0	0 = INSIGNIFICANT	3 = HIGH
	PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME
	PERSONAL PROTECTIVE EQUIPMENT	A	Safety Glasses	

REVISION SUMMARY:
This MSDS has been revised in the following sections:
Complete format update

MSDS Prepared by:
Jamson Laboratories, Inc.
101 South Bayview Blvd.
Oldsmar, FL 34677 USA
(813) 855 - 4565 www.jamsonlabs.com

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Material Safety Data Sheet

An RPM Company

24 Hour Emergency Phone Numbers:
Medical/Poison Control:
In U.S.: Call 1-800-222-1222
Outside U.S.: Call your local poison control center
Transportation/National Response Center:
1-800-535-5053
1-352-323-3500

NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in American Spanish upon request.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: Daptex Plus Multi-Purpose Foam Sealant
Product UPC Number: 070798188228, 070798188365
Product Use/Class: Pressurized Latex Foam
Manufacturer: **DAP Inc.**
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Revision Date: 12/27/2011
Supersedes: 03/13/2009
MSDS Number: 00077344001

Section 2 - Hazards Identification

Emergency Overview: A(n) white to off-white liquid product with a slight alcoholic odor. DANGER! Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. May cause eye, skin, nose, throat and respiratory tract irritation. Vapors harmful if inhaled. Harmful if swallowed or absorbed through the skin. Contents under pressure. Do not puncture can. Exposure to temperatures above 120 'F may cause can to rupture. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause skin irritation.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Effects Of Overexposure - Ingestion: Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration. Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged exposure may cause skin, respiratory, kidney and liver damage. Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene

glycol has been shown to cause birth defects in laboratory animals.

This product contains vinyl acetate which is classified as a class 2B carcinogen by IARC. Vinyl acetate was found to cause cancer in the respiratory tract of laboratory animals. There is no evidence that vinyl acetate causes cancer in humans. The IARC published a monograph on vinyl acetate (1995). In this monograph, IARC indicates "there is inadequate evidence in humans for carcinogenicity of vinyl acetate. There is limited evidence in experimental animals for the carcinogenicity of vinyl acetate." Normally, this lack of conclusive evidence would place a substance in the IARC 3 classification (not classified as a human carcinogen). However, because vinyl acetate is metabolized to acetaldehyde, which has an IARC 2B (possibly carcinogenic to humans) classification, it also has been listed under Category 2B.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
108-05-4	Vinyl acetate	Confirmed animal carcinogen with unknown relevance to humans.	Not Listed.	Possibly carcinogenic to humans.	Not Listed.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Isopropyl alcohol	67-63-0	1-5
Ethylene glycol	107-21-1	1-5
1-Docosanol	661-19-8	1-5
Dimethyl ether	115-10-6	1-5
Propane	74-98-6	1-5
n-Butane	106-97-8	1-5
Vinyl acetate	108-05-4	0.1-1.0

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing. If skin irritation persists, call a physician.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Store away from caustics and oxidizers. Do not smoke. Extinguish all flames and

pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks and flames.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Keep away from open flames, hot surfaces and sources of ignition. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Use only with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing. Provide fresh air such that chemical odors cannot be detected during use and while drying. Wash thoroughly after handling. Construction and repair activities can adversely affect indoor air quality. Consult with occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize impact.

Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Make sure nozzle is directed away from yourself prior to discharge.

Storage: Keep away from heat and sources of ignition. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Protect material from direct sunlight. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Isopropyl alcohol	67-63-0	200 PPM	400 PPM	N.E.	400 PPM	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
1-Docosanol	661-19-8	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Dimethyl ether	115-10-6	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Propane	74-98-6	1000 PPM	N.E.	N.E.	1000 PPM	N.E.	N.E.	No
n-Butane	106-97-8	1000 PPM	N.E.	N.E.	N.E.	N.E.	N.E.	No
Vinyl acetate	108-05-4	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	No

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits. Provide sufficient general and/or local exhaust ventilation to maintain exposure below recommended exposure limit. Highly flammable vapors are heavier than air and may accumulate in low areas. Vapors are heavier than air and may spread along floors. Check all low areas for presence of vapor. Refer to OSHA Standards 29 CFR 1910.94 and 29 CFR 1910.107.

Respiratory Protection: If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Heavier Than Air
Odor:	Slight Alcoholic	**Odor Threshold:**	Not Established
Color:	White to Off-White	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	1.00 - 1.01
Freeze Point:	Not Established	**pH:**	Between 7.0 and 12.0
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Liquid	**Flammability:**	Level I Aerosol
Flash Point, F:	Aerosol	**Method:**	(Not Applicable)
Lower Explosive Limit, %:	Not Determined	**Upper Explosive Limit, %:**	Not Determined

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50
67-63-0	Isopropyl alcohol	Rat:5045 mg/kg	Rat:16000 ppm/8H
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg
108-05-4	Vinyl acetate	----------	Rat:11400 mg/m3/4H

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): D001 if residue remains.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosols, flammable	**Packing Group:**	N.A.
DOT Technical Name:	N.A.	**Hazard Subclass:**	N.A.
DOT Hazard Class:	2.1 Flammable gas	**DOT UN/NA Number:**	UN1950

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard, Fire Hazard, Pressurized Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Isopropyl alcohol	67-63-0
Ethylene glycol	107-21-1
Vinyl acetate	108-05-4

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Water	7732-18-5

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Water	7732-18-5

California Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 3 Reactivity: 0 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 168.8 lb/gal: 1.41 wt:wt%: 11.1

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 8.7

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
CEIL – Ceiling Exposure Limit	STEL – Short Term Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	MSDS – Material Safety Data Sheet
C – Degree Celsius	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

104951

Technical Bulletin

2400 Boston Street, Suite 200, Baltimore, Maryland 21224
Phone: 410-675-2100 or 800-543-3840

Revised: 03-22-11

DAPtex® Plus Multi-Purpose Foam Sealant

- **Seals, insulates and weatherproofs**
- **Easy water clean-up**
- **Won't overexpand**
- **Tough and durable**
- **Conserves energy to save money**
- **No paint thinner required**
- **Water resistant**
- **Paintable**
- **Toolable and moldable**
- **Reusable, non-clogging applicator**
- **Interior /Exterior**

Packaging:	Net Wt. 12oz (340g)
Color:	White
UPC Number:	0 70798 18836 5, 0 70798 18822 8

Company Identification:

Manufacturer:	DAP Products Inc., 2400 Boston St., Baltimore, Maryland 21224
Usage Information:	DAP HELPLINE: 888-DAP-TIPS, 9:00 am to 7:00 pm EST.
Order Information:	800-327-3339
Fax Number:	410-534-2650

Also, visit the DAP website at **dap.com.**

Product Description:

DAPtex® Plus Multi-Purpose Foam Sealant is a latex-based product used for filling voids and sealing large gaps. Designed to meet the tough standards demanded for professional window & door installations while offering the easiest-to-use technology for DIYers. When applied properly, this patented formula helps reduce energy loss and damage that can be caused by air, rain and pest infiltration.

Suggested Uses:

Seals and Insulates:
- Windows
- Doors
- Ducts
- Pipes
- Vents
- Electrical Box Perimeters

Great for:
- Wood
- Concrete
- Brick
- Vinyl
- Steel
- Aluminum

Performance Characteristics:

- **DAPtex® Plus** will not over expand like polyurethane foams. **DAPtex® Plus** will expand to 90% of its full size immediately upon application. Full expansion will be achieved within 20-30 minutes, depending on bead size, temperature and humidity.
- Proven not to bow, buckle or distort window and door frames.
- Tack free in 10 minutes. A one inch bead fully cures in 24 hours depending on bead size, temperature and humidity.
- Toolable and moldable while wet. Do not trim or remove skin of the cured foam.
- Flexible when cured.
- Cured foam can be painted with latex paint.
- Easy soap and water clean-up when wet.
- When fully cured the product should be firm to the touch and withstand moderate pressure.

Surface Preparation & Application:

INSTRUCTIONS: READ DIRECTIONS AND SAFETY INFORMATION BEFORE USE!

1. Product is EXTREMELY FLAMMABLE WHILE DISPENSING! Refer to label and Material Safety Data Sheet and extinguish all ignition sources during use and cure.
2. To avoid risk of electric shock when perimeter sealing electrical switches and outlet boxes, disconnect power during application of product and until product is fully cured. *When perimeter sealing switches or electrical boxes, do not fill box.
3. Wear safety glasses and use in well-ventilated areas.
4. Clean and remove grease, dirt and debris from application area.
5. Shake can vigorously for 1 minute before use.
6. Push straw into nozzle located above the trigger.
7. Remove safety tab above trigger.
8. Apply at temperatures between 45°F -105°F. The product should be above 60°F for optimum dispensing rate.
9. Slowly dispense foam from can in upright position, filling cavity to 90% to allow for minimal expansion.
10. For best results, tool or shape while wet. Do not trim or remove skin of the cured foam.
11. **For exterior applications, foam must be painted with a quality exterior latex paint after fully cured.**
12. If storing for reuse, remove straw and clean it and nozzle with warm water. Cured material can be removed from nozzle or straw with a pipe cleaner or paper clip.
13. Not recommended for use at or below grade, or for closed cavities. For gaps more than 2" deep, use multiple layers of 1"-2" each.

Physical & Chemical Characteristics:

Color	White
Consistency:	Foam (cured product has sponge-like consistency)
Vehicle:	Latex
Flash Point(of blowing agent):	<0°F
Flammability:	Level I Aerosol
Propellant:	Proprietary
Shelf Life:	12 Months when stored at 60-100°F
Temperature Service Range:	0°F to 150°F
Temperature Application Range:	45°F to 105°F (45°F and rising)
Packaging:	Standard – 12 oz. Aerosol Can
MSDS No.:	000 77344 003
Coverage:	One 12 oz. Can yields 510 feet at a 1/4" bead

Clean Up and Storage:

Uncured foam can be cleaned up with soap and water. Excess cured sealant can be scraped off.

Safety:
See product label and Material Safety Data Sheet (MSDS) for complete safety information. You can request an MSDS by visiting our website at dap.com or by calling 888-DAP-TIPS.

Warranty Information:
Buyer assumes all risks of use, handling and storage of product not in strict accordance with label directions. Liability for any incidental or consequential damages or loss is specifically excluded at all times. Any implied **warranty of fitness for a particular use** is excluded. Seller will not accept liability for more than product placement or purchase price refund.

An RPM Company

SAFETY DATA SHEET

1. *CHEMICAL PRODUCT & MANUFACTURER:*

dasManufacturing Inc.
3610 Cinnamon Trace Drive
Valrico, FL 33596
800 549 6024

PRODUCT: RS-222 Weatherskin Mastic
Recommended for use as: Seam Sealer
Restrictions on use:

PRODUCT NAME: RS-222 Weatherskin Mastic
CHEMICAL FAMILY: HYDROCARBON

MANUFACTURER/DISTRIBUTOR:
SAME AS ABOVE

TELEPHONE:
SAME AS ABOVE

24 HOUR EMERGENCY CONTACT NUMBER: ChemTrec - 800-424-9300

2. *HAZARDS IDENTIFICATION:*

GHS Rating (1=Most Severe 4=Least Severe): HEALTH 2 FLAMMABILITY 2 REACTIVITY 0

DANGER

Highly flammable liquid and vapor. (H225)
Causes skin irritation. (H315)
May be fatal if swallowed and enters airways. (H304)
May cause drowsiness or dizziness. (H336)

Precautionary Statement(s):

Do not handle until all safety precautions have been read and understood (P202)
Store in a well-ventilated place. Keep containers tightly closed. Keep cool. (P403 + P233+P235)
Keep away from heat/sparks/open flames/hot surfaces-No smoking. (P210)
Ground/bond container and receiving equipment. Take precautionary measures against static discharge. (P240+P243)
IF SWALLOWED: Get medical advice/attention Immediately call a POISON CENTER or doctor/physician.. (P301 +P310+ P313)
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing ((P304 + PP340)
If on skin (or hair): Remove/Take-off immediately all contaminated clothing. Rinse skin with water/shower. (P303+ P361+P353)
Do NOT induce vomiting. (P331)

Wear protective gloves/protective clothing. Manufacturer/supplier or the competent authority to specify type of equipment (P280)
Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools (P241 + P242)
Dispose of contents/container to approved disposal facility. (P501)
Avoid breathing dust/fume/gas/mist/vapors/spray (P261)
In case of fire: Use NFPA Class B extinguishers. If water is used, use fog nozzles. (P370 + P378)

3. *COMPOSITION & PRODUCT INFORMATION ON HAZARDOUS INGREDIENTS:*

	WT%	CAS#	ACGIH TLV-8 HR/TWA
TOLUENE	33.67	108-88-3	20 PPM

4. *FIRST AID MEASURES:*

INHALATION: REMOVE TO FRESH AIR IF OVERCOME. IF BREATHING HAS STOPPED BEGIN CPR. CALL A PHYSICIAN AT ONCE.

EYE CONTACT: FLUSH WITH WATER FOR 15 MINUTES.

SKIN CONTACT: WASH WITH HAND CLEANER; FOLLOW WITH SOAP AND WATER.

PERSONAL PROTECTION: ACGIH STEL: 50 PPM
RESPIRATORY PROTECTION: VENTILATE TO KEEP VAPORS BELOW THRESHHOLD LIMIT VALUES. NIOSH APPROVED RESPIRATORS FOR AREAS OF CONCENTRATED VAPORS.
EYES: SPLASH GOGGLES FOR LIQUID PRODUCTS
GLOVES: MUST BE IMPERVIOUS TO SOLVENTS

INGESTION: DO NOT INDUCE VOMITING. CALL PHYSICIAN AT ONCE.

NOTE TO PHYSICIAN: CONTAINS PETROLEUM DISTILLATES.

PRIMARY ROUTES OF ENTRY: INHALATION, SKIN

5. *FIRE FIGHTING MEASURES:*

FLASHPOINT, TAG CLOSED CUP: 40 F

GENERAL HAZARD: EXTREMELY FLAMMABLE. MAY FORM COMBUSTIBLE OR EXPLOSIVE MIXTURES WITH AIR. CLOSED CONTAINERS MAY EXPLODE IF EXPOSED TO EXTREME HEAT. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL CONSIDERABLE DISTANCES TO IGNITION SOURCES AND FLASH BACK.

FIRE FIGHTING INSTRUCTIONS: WATER SPRAY MAY BE INEFFECTIVE BUT MAY BE USED TO COOL CLOSED CONTAINERS. IF WATER IS USED, USE FOG NOZZLES.

FIRE FIGHTING EQUIPMENT: NFPA CLASS B EXTINGUISHERS (CO2, FOAM, DRY CHEMICAL) AND SELF-CONTAINED BREATHING APPARATUS

COMBUSTION PRODUCTS: SMOKE, NORMAL COMBUSTION PRODUCTS.

6. *ACCIDENTAL RELEASE MEASURES:*

LAND SPILL: REMOVE ALL SOURCES OF IGNITION, VENTILATE AREA AND REMOVE MATERIAL WITH ABSORBENTS AND/OR NON-SPARKING TOOLS.

WATER SPILL: USE ABSORBENT BOOMS TO DIKE AREA AND MINIMIZE AREA OF CONTAMINATION.

7. *STORAGE AND HANDLING:*

STORAGE TEMPERATURE: AMBIENT
STORAGE PRESSURE: ATMOSPHERIC

GENERAL: KEEP MATERIAL AWAY FROM HEAT, SPARK AND OPEN FLAME. DO NOT STORE IN OPEN OR UNLABELED CONTAINERS. USE WITH ADEQUATE VENTILATION. DO NOT STORE ABOVE 120F
STATIC ACCUMULATOR: THIS MAY FORM AN IGNITABLE VAPOR/AIR MIXTURE IN CLOSED TANKS OR CONTAINERS. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS. DO NOT CUT, BRAZE OR WELD. ***FOR INDUSTRIAL USE ONLY.*** **KEEP OUT OF THE REACH OF CHILDREN.**
READ PRODUCT LABEL AND OBSERVE ALL PRECAUTIONS BEFORE USE.

==========

8. *EXPOSURE CONTROL/PERSONAL PROTECTION :*

ENGINEERING CONTROLS: LOCAL EXHAUST: PREFERABLE
MECHANICAL EXHAUST: ACCEPTABLE-USE ONLY
CLASS I GROUP D APPROVED DEVICES.

9. *PHYSICAL AND CHEMICAL PROPERTIES:*

SPECIFIC GRAVITY: 1.2
DENSITY: (IN LBS): 10.01
VAPOR DENSITY: AP 3 (air=1)
EVAPORATION RATE (nBuAc=1): 1.9
SOLUBILITY IN WATER: NIL
BOILING RANGE (F): 228-231F
PHYSICAL STATE: Paste
% VOLATILE BY VOLUME: 28.4
AUTOIGNITION TEMPERATURE: 997F
DECOMPOSITION TEMPERATURE: NOT AVAILABLE
EXPLOSIVE/FLAMMABLE LIMITS: (LEL): 1.2 (UEL): 7

FLASH POINT: TAG CLOSED CUP: 40 F
VAPOR PRESSURE AT 20C (MM OF HG): 24
(VOC) CONTENT: 404 g/liter
APPEARANCE: M5025W=white paste M5025B=black paste
ODOR: CHARACTERISTIC HYDROCARBON SOLVENT
ODOR THRESHOLD: NO DATA
PH: NOT APPLICABLE
MELTING POINT/FREEZING POINT: -139 F
PARTITION COEFFICIENT: n-octanol/water= NO DATA

10. *STABILITY AND REACTIVITY:*

GENERAL: THIS PRODUCT IS STABLE AND HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: AVOID STRONG OXIDIZING AGENTS. AVOID ALL SOURCES OF IGNITION. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO AN IGNITION SOURCE AND FLASHBACK.

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

11. *TOXICOLOGICAL INFORMATION:*

NOT IDENTIFIED AS A CARCINOGEN BY NTP, IARC OR OSHA

HEALTH EFFECTS:
LIKELY ROUTES OF EXPOSURE: skin adsorption, inhalation
DELAYED AND IMMEDIATE CHRONIC EFFETS FROM SHORT AND LONG-TERM EXPOSURE:
Skin: dry skin, dermatitis, de-fatting of the skin with chapping and cracking.
Inhalation: Inebriation, followed by headache and nausea. Dizziness, convulsions and unconsciousness in severe cases. Anorexia and nervousness may persist for several months following acute overexposure.

NUMERICAL MEASURES (ACUTE TOXICITY ESTIMATE):

12. *ECOLOGICAL INFORMATION:*

AQUATIC AND/OR TERRESTRIAL EXOTOXICITY: UNKNOWN
PERSISTENCE AND DEGRADABILITY: UNKNOWN
BIOACCUMLATIVE POTENTIAL: UNKNOWN

13. *DISPOSAL CONSIDERATIONS:*

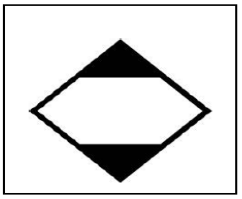
THIS MATERIAL IS CONSIDERED A HAZARDOUS WASTE FOR DISPOSAL PURPOSES. SEE 40 CFR PART 261.7 FOR FURTHER INFORMATION CONCERNING THE DISPOSITION OF EMPTY CONTAINERS. HAZARDOUS WASTES MAY NOT BE LANDFILLED! REFER TO 40 CFR PART 261 SUBPART C FOR DEFINITIONS OF HAZARDOUS WASTE.

14. *TRANSPORTATION INFORMATION:*

U.S. Department of Transportation (DOT)

Shipping Description:	**UN1133, Adhesives, 3, PGII**
Non-Bulk Package marking:	**Adhesives, UN1133**
Non-bulk package labeling:	**Flammable liquid**
Packaging references:	**49 CFR 172.101 adhesives containing a flammable liquid**
Exceptions:	**173.150 Consumer commodity LQ-label no other marking required**
Hazardous Substance:	**See section for RQ's if applicable**
Emergency Response Guide:	**128**

SPECIAL SHIPPING INFORMATION: *WHEN PACKAGED IN CAULKING TUBES IN TESTED, CARDBOARD OUTER CARTONS WEIGHING < 66 POUNDS, THIS MATERIAL MAY BE SHIPPED PER HM-215K AS A LIMITED QUANTITY. SHIPPED AS A LIMITED QUANTITY, A LIMITED QUANTITY SHIPPING LABEL IS REQUIRED ON THE CARTON ONLY. OTHER SPECIAL DESCRIPTIONS, MARKS, LABELS OR PLACARDS ARE NOT NECESSARY AND THE MATERIAL MAY BE DESCRIBED ON THE BILL OF LADING BY PRODUCT NAME RATHER THAN PROPER SHIPPING DESCRIPTION.*



LIMITED QUANTITY LABEL
(Actual size is 100mm X 100mm)

International Maritime Dangerous Goods (IMDG)

Shipping Description:	**UN1133, Adhesives, 3, PGII**
Non-bulk Package marking:	**Adhesives, UN1133**
Labels:	**Flammable liquid**
Packaging-Non-Bulk:	**P001 UN MODEL RULES ALSO: 49 CFR 172.101 adhesives containing a flammable liquid**
Exceptions:	**PP1 UN MODEL RULES ALSO: 173.150 Consumer commodity LQ-label no other marking required**
EMS:	
Marine pollutant:	

International Civil Aviation Org./ International Air Transport Assoc. (ICAO/IATA)

UN/ID #:	**UN1133**
Proper Shipping Name:	**Adhesives**
Hazard Class/Division:	**3**
Subsidiary risk:	
Packing Group:	**II**
Non-Bulk Package marking:	**Adhesives, UN1133**
Labels:	**Flammable liquid**
Exceptions:	**UN/ID#8000 Consumer commodity Limited Quantity for air label**
ERG Code:	**128**

15. *REGULATORY INFORMATION:*

OSHA STATUS: HAZARDOUS

CERCLA REPORTABLE QUANTITY: NONE

SARA TITLE III:
SECTION 302: EXTREMELY HAZARDOUS SUBSTANCES: NONE
SECTION 311/312: 311-YES 312-YES
SECTION 313: Contains 33.67 % toluene which is a reportable Section 313 chemical

RCRA STATUS: IF DISCARDED IN ITS PURCHASED FORM, THIS PRODUCT IS A RCRA HAZARDOUS WASTE. IT IS THE RESPONSIBILITY OF THE PRODUCT USER TO DETERMINE AT THE TIME OF DISPOSAL, WHETHER A MATERIAL CONTAINING THE PRODUCT OR RESIDUE OF THE PRODUCT REMAINS CLASSIFIED A HAZARDOUS WASTE AS PER 40 CFR 261, SUBPART C. STATE OR LOCAL REGULATIONS MAY ALSO APPLY IF THEY DIFFER FROM THE FEDERAL REGULATION.

TSCA Status: All materials contained in this product are TSCA listed.
Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substances List
European Union Status: All materials contained in this product are listed on EINECS

16. *OTHER INFORMATION:*

APPROVAL DATE: 01-05-2015
SUPERSEDES DATE:
REASON FOR REVISION: NEW SDS FORMAT
MSDS FORMAT: TOLUENE PRODUCTS AND MIXTURES

THE INFORMATION HEREIN IS PRESENTED IN GOOD FAITH AND BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. INFORMATION IS BASED UPON SUPPLIER-ISSUED SAFETY DATA SHEETS AND MAY BE SUBJECT TO ERROR. IF APPRISED OF CHANGES, UPDATED SDS WILL BE PROMPTLY ISSUED. USERS MUST MAKE THEIR DETERMINATION REGARDING THE SUITABILITY OF THE PRODUCT FOR THEIR OWN PURPOSES PRIOR TO USE.

READ PRODUCT LABEL CAREFULLY BEFORE USE AND FOLLOW ALL PRECAUTIONS.

END OF SDS

SAFETY DATA SHEET

Issuing Date: 23-Mar-2017 **Revision Date:** 23-Mar-2017 **Version** 1

This Safety Data Sheet (SDS) is not required under local legislation, implementing the UN Globally Harmonized System (GHS). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product

1. IDENTIFICATION

Product Name	Dawn Professional Manual Pot and Pan Detergent® - Made-From-Concentrate
Product Code(s)	1-00
Product Identifier	91118669_DIL_PROF_NG
Product Type:	Finished Product - Professional Use Only
Recommended Use	Dish Care.
Details of the supplier of the safety data sheet	Procter & Gamble Professional 2 P&G Plaza Cincinnati, Ohio 45202 Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-332-7787
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Not Classified.

Hazard Statements	None
Hazard pictograms	None
Precautionary Statements	None
Precautionary Statements - Response	None
Precautionary Statements - Storage	None
Precautionary Statements - Disposal	Dispose of contents/container in accordance with local regulation
Hazards not otherwise classified (HNOC)	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact	Rinse with plenty of water. Get medical attention immediately if irritation persists.
Skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Most important symptoms/effects, acute and delayed	None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical, CO_2, alcohol-resistant foam or water spray. Dry chemical. Alcohol-resistant foam.
Unsuitable Extinguishing Media	None.
Special hazard	None known.
Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific hazards arising from the chemical	None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Do not get in eyes, on skin, or on clothing.
Advice for emergency responders	Use personal protective equipment as required.
Environmental precautions	Keep out of waterways Do not discharge product into natural waters without pre-treatment or adequate dilution

Methods and materials for containment and cleaning up

Methods for containment	Absorb with earth, sand or other non-combustible material and transfer to containers for

later disposal. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines No exposure limits noted for ingredient(s).

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of inadequate ventilation wear respiratory protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	Liquid
Appearance	Clear
Odor	Scented
Odor threshold	No information available

Property	Values	Note
pH value	8.67	
Melting/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	93.3 °C / 199.9 °F	Closed cup. Does not sustain combustion. Product is an aqueous solution containing <=24% alcohol and >=50% water.
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	No information available	
Water solubility	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.
Viscosity of Product	No information available	
VOC Content (%)	Products comply with US state and federal regulations for VOC content in consumer products.	

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid None in particular.

Hazardous Decomposition Products None under normal use conditions.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	No known effect.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	No known effect.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.
California Hazardous Waste Codes (non-household setting)	331

14. TRANSPORT INFORMATION

DOT	Not regulated
IMDG	Not regulated
IATA	Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):.

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):.

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)
This product does not contain any substances regulated by state right-to-know regulations.

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
United States Toxic Substances Control Act Section 8(b) Inventory (TSCA)
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 23-Mar-2017
Revision Date: 23-Mar-2017
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

SAFETY DATA SHEET

Issuing Date: 19-Oct-2017 **Revision Date:** 19-Oct-2017 **Version** 1

This Safety Data Sheet (SDS) is not required under local legislation, implementing the UN Globally Harmonized System (GHS). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product

1. IDENTIFICATION

Product Name	Dawn Ultra Plus Heavy Duty
Product Identifier	91530684_RET_NG
Product Type:	Finished Product - Consumer (Retail) Use Only
Recommended Use	Dish Care.
Restrictions on Use	Use only as directed on label.
Details of the supplier of the safety data sheet	PROCTER & GAMBLE - Fabric and Home Care Division Ivorydale Technical Centre 5289 Spring Grove Avenue Cincinnati, Ohio 45217-1087 USA Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-331-3774
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category	
Eye Damage / Irritation	Category 2B
Flammable Liquids	Category 3
Signal Word	WARNING
Hazard Statements	Flammable liquid and vapor Causes eye irritation
Hazard pictograms	FLAMMABLE LIQUID AND VAPOR

Precautionary Statements
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Wash hands thoroughly after handling

Precautionary Statements - Response
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
In case of fire: Use water, CO2, dry chemical, or foam for extinction
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF SWALLOWED:
Drink 1 or 2 glasses of water

Precautionary Statements - Storage Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal Dispose of contents/container in accordance with local regulation

Hazards not otherwise classified (HNOC) None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight-%
Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	No	68585-47-7	20 - 25
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	No	68585-34-2	5 - 10
Amine oxides, C10-16-alkyldimethyl	Amine oxides, C10-16-alkyldimethyl	No	70592-80-2	5 - 10
Ethanol	Ethanol	No	64-17-5	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention immediately if symptoms occur.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions. Risk of serious damage to eyes.

F. Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media In case of fire: Use water, CO2, dry chemical, or foam for extinction.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Special hazard Fumes may catch fire.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Keep away from open flames, hot surfaces and sources of ignition. Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a cool/low-temperature, well-ventilated, dry place away from heat and ignition sources.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	CAS-No	ACGIH TLV	OSHA PEL	Mexico PEL
Ethanol	64-17-5	STEL: 1000 ppm	TWA: 1000 ppm	Mexico: TWA 1000 ppm

			TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³	Mexico: TWA 1900 mg/m³

Chemical Name	CAS-No	Alberta	Quebec	Ontario TWAEV	British Columbia
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1880 mg/m³	TWA: 1000 ppm TWA: 1880 mg/m³	STEL: 1000 ppm	STEL: 1000 ppm

No relevant exposure guidelines for other ingredients

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of inadequate ventilation wear respiratory protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C Liquid
Appearance Clear blue
Odor Perfume
Odor threshold No information available

Property	Values	Note
pH value	9.2	10% aqueous solution
Melting/freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	57 °C / 134.6 °F	Does not sustain combustion. Product is an aqueous solution containing <=24% alcohol

and >=50% water.

Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limits in Air	
Upper flammability limit	No information available
Lower Flammability Limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Water solubility	No information available
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available .
Decomposition temperature	No information available .
Viscosity	No information available
VOC Content (%)	Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials None in particular.

Hazardous Decomposition Products None under normal use conditions.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	Irritating to eyes.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

Component Information

Chemical Name	CAS-No	Oral LD50	Dermal LD50	Inhalation LC50

Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	68585-34-2	>2001 mg/kg	-	-
Amine oxides, C10-16-alkyldimethyl	70592-80-2	LD50: 1064 mg/kg, bw. OECD 401. Species: Rat	LD50: > 2000 mg/kg, 24 hours, bw. OECD 402. Species: Rat	-
Ethanol	64-17-5	10470 mg/kg bw (OECD 401)	-	116.9 mg/L air (//OECD 403)

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):.

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):.

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)
.

Chemical Name	CAS-No	New Jersey
Ethanol	64-17-5	X

Chemical Name	CAS-No	Massachusetts
Ethanol	64-17-5	X

Chemical Name	CAS-No	Pennsylvania
Ethanol	64-17-5	X
Sodium hydroxide	1310-73-2	X

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
United States Toxic Substances Control Act Section 8(b) Inventory (TSCA)
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 19-Oct-2017
Revision Date: 19-Oct-2017
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

SAFETY DATA SHEET

AiRx™ Diesel Exhaust Fluid

Section 1. Identification

GHS product identifier : AiRx™ Diesel Exhaust Fluid

Other means of identification : Designation or trade mark: Automotive grade urea solution, AUS 32, AdBlue
TM
Aqueous Urea Solution 32.5%

Product use : Synthetic/Analytical chemistry.

Synonym : Designation or trade mark: Automotive grade urea solution, AUS 32, AdBlue
TM
Aqueous Urea Solution 32.5%

SDS # : 008651

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : Warning

Hazard statements : Not applicable

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Powered by IHS

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Designation or trade mark: Automotive grade urea solution, AUS 32, AdBlue TM Aqueous Urea Solution 32.5%

CAS number/other identifiers

CAS number : Not applicable.

Product code : 008651

Ingredient name	%	CAS number
WATER urea	66.3 - 67.7 31.8 - 33.2	7732-18-5 57-13-6

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

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Section 4. First aid measures

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
urea	**AIHA WEEL (United States, 10/2011).** TWA: 10 mg/m³ 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

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Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Colorless.

Boiling/condensation point : Lowest known value: 100°C (212°F) (water).

Melting/freezing point : -11.111°C (12°F)

Critical temperature : Not available.

Odor : ammonia (pungent) [Slight]

Odor threshold : Not available.

pH : Not available.

Flash point : Not available.

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Gas Density (lb/ft ^{3}) : Weighted average: 1.09

Relative density : Not available.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not available.

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Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatibility with various substances : Highly reactive or incompatible with the following materials: metals.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
urea	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

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Section 11. Toxicological information

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

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Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 6573.1 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 3910000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 22.5 ppt Fresh water	Fish - Oreochromis mossambicus - Young	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
urea	<-1.73	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.

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Section 14. Transport information

Additional information	-	-	-	-	-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
urea	31.8 - 33.2	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

Canada inventory : All components are listed or exempted.

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Section 15. Regulatory information

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

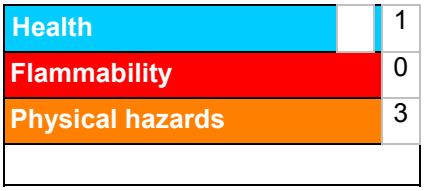
WHMIS (Canada) : Not controlled under WHMIS (Canada).

CEPA Toxic substances: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Section 16. Other information

Canada Label requirements : Not controlled under WHMIS (Canada).

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Section 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 3/4/2015.

Date of issue/Date of revision : 3/4/2015.

Date of previous issue : 3/4/2015.

Version : 0.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations
CPR – Controlled Products Regulations
DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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DELO® 400 LE

SAE 15W-40

PRODUCT DESCRIPTION

"Delo. Let's go further.™"

Delo® 400 LE SAE 15W-40 is a mixed fleet motor oil recommended for naturally aspirated and turbocharged four-stroke diesel engines and four-stroke gasoline engines in which the API CJ-4 service category and SAE 15W-40 viscosity grade are recommended.

CUSTOMER BENEFITS

Delo 400 LE SAE 15W-40 is an API CJ-4 heavy duty engine oil specifically formulated for on-highway and off-highway applications including 2010 compliant low emission diesel engines with Selective Catalytic Reduction (SCR), Diesel Particulate Filter (DPF) and Exhaust Gas Recirculation (EGR). It is fully compatible with previous engine models and previous API Oil Service Categories. It delivers value through:

- **Minimized operating costs** — Exceptional soot dispersancy and wear control. Cylinders, pistons, rings, and injectors are well protected against wear and corrosion, providing optimum service life and minimal maintenance. Contributes to maximum vehicle utilization and minimal downtime.
- **Excellent emission control system life** — Provides optimum Diesel Particulate Filter (DPF) life for minimal downtime and cleaning, thus managing your maintenance costs.
- **Managed inventory costs** — Backward compatible with previous API Oil Service Categories and engine models. Suitable for use in four-stroke gasoline and naturally aspirated, turbocharged and modern electronically controlled/low emission diesel engines calling for an SAE 15W-40 heavy duty motor oil. Allows users with a wide mix of engine brands to enjoy simplified inventory and dispensing systems that may contribute to saving money, space and handling time.
- **Warranty Plus protection** — Bumper-to-bumper warranty protection from the engine to the drive train. Payment for Chevron lubricant-related damage to your equipment, including parts and labor.[1] Problem resolution and technical advice from Chevron's lubrication experts.
- **Access to Chevron's lubrication and industry knowledge** — Help maximize your bottom line business results.

FEATURES

Delo 400 LE SAE 15W-40 is an industry leading, super premium quality engine oil which exceeds industry and engine manufacturers' performance requirements. It is the most recommended OEM viscosity grade for over-the-road and off-highway diesel engines.

It is formulated using the most advanced additive technology to provide outstanding protection for on- and off-highway applications including 2010 compliant engines of on highway diesel trucks burning Ultra Low Sulfur Diesel (ULSD).

Delo 400 LE SAE 15W-40 is formulated with ISOSYN® Technology. ISOSYN Technology is a combination of premium base oils and high performance additives with Chevron's formulating expertise that "Rivals Synthetic Performance" and provides superb diesel engine parts protection - all at an outstanding value. ISOSYN Technology benefits customers by helping:

- Provide Extended Service Protection
- Maximize Engine Durability
- Minimize Operating Cost

Today, Delo 400 LE SAE 15W-40 meets the most stringent EGR soot control and particulate requirements.

1 See Warranty Plus for details and restrictions.

Product(s) manufactured in the USA.
Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

A **Chevron** company product

5 March 2013
HDMO-25

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Delo® 400 LE SAE 15W-40 has been specifically designed to meet the demands of EGR and SCR engines while at the same time providing exceptional performance in conventional engines and other engine technologies like Caterpillar ACERT.

FUNCTIONS

Delo 400 LE SAE 15W-40 helps keep rings clean and free for maximum combustion pressure and minimal wear. Delo 400 LE SAE 15W-40 minimizes valve and piston crown land deposits, leading to minimal oil consumption. Its high level of ashless dispersants keeps fuel soot in suspension and helps avoid filter plugging, heavy cylinder head sludge, abrasive polishing wear, high viscosity increase, and oil gelling. These problems can result in excessive engine wear and bearing failure on startup, without prior indication to the operator.

Specially selected oxidation inhibitors control oxidation, sludge, and undue thickening during oil drain periods. Delo 400 LE SAE 15W-40's unique blend of extreme pressure antiwear additive protects against valve train wear and scuffing of highly loaded parts operating under boundary lubrication. A specially selected viscosity index improver ensures easy flow at low temperatures and excellent film protection in hot engine areas. A defoaming additive prevents air entrapment.

The combination of premium dispersant additives and ISOSYN® Technology allows Delo 400 LE SAE 15W-40 to effectively disperse soot and keep it in suspension. This minimizes the risk of valve train wear, lever polishing, and filter plugging.

APPLICATIONS

Delo 400 LE SAE 15W-40 is a mixed fleet motor oil recommended for naturally aspirated and turbocharged four-stroke diesel engines and four-stroke gasoline engines in which the API CJ-4 service category and SAE 15W-40 viscosity grade are recommended. It is formulated for engines operating under severe service and a wide range of climatic conditions.

Delo 400 LE SAE 15W-40 is excellent for use in new advanced engines developed to meet the latest emissions and reliability standards and in engines equipped with features like four-valve heads, super-charging, turbo-charging, direct injection, shorter piston crowns, higher power density, intercooling, full electronic management of fuel and emissions systems, exhaust selective catalytic reduction, exhaust gas recirculation, and exhaust particulate filters.

It is formulated for exceptional performance with Ultra Low Sulfur Diesel and low sulfur diesel fuels.

This product is recommended for use in:

- Today's most modern on-highway low emission designs as well as in older engines.
- Today's most modern off-highway engines including those adapted for future emissions standards in construction, agriculture, marine, and mining applications.

Delo 400 LE SAE 15W-40 is approved for:

- **API Service Categories** CJ-4, CI-4 PLUS, CI-4, CH-4, CF, SM, SL
- **Cummins** CES 20081
- **Daimler** MB-Approval 228.31
- **DDC** Power Guard 93K218
- **Deutz** DQC III-10 LA
- **Mack** EO-O Premium Plus
- **MAN** 3575
- **MTU** Category 2.1
- **Renault** VI RLD-3
- **Volvo** VDS-4

Delo 400 LE SAE 15W-40 meets the requirements of:

- **Caterpillar** ECF-3, ECF-2
- **JASO** DH-2
- **ACEA European Service Categories** E9-08, E7-08
- **major diesel engine manufacturers':**
  - — Caterpillar
  - — Cummins
  - — Detroit Diesel
  - — MACK
  - — MAN
  - — Mercedes
  - — Volvo

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

TYPICAL TEST DATA

SAE Grade	15W-40
Product Number	*222220*
MSDS Number	*17108*
Density @ 15°C, kg/L	0.8806
Viscosity, Kinematic cSt at 40°C cSt at 100°C	 125 15.7
Viscosity, Cold Crank, °C/Poise	-20/64
Viscosity Index	132
Flash Point, °C(°F), minimum	> 204(399)
Pour Point, °C(°F)	-33(-27)
Sulfated Ash, wt %	1.0
Base Number, ASTM D2896	9.6
Phosphorus, wt %	0.12
Sulfur, wt %	0.32
Zinc, wt %	0.13

Minor variations in product typical test data are to be expected in normal manufacturing.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

LAGASSE BROTHERS
1525 KUEBEL STREET
NEW ORLEANS, LA 70123

PHONE 504-736-5500

HMIS RATING	
Health	*0*
Flammability	*0*
Reactivity	*0*
Personal Protection	*NA*

1. PRODUCT ***DERMABRAND ANTIBACTERIAL LOTION SOAP***

2. HAZARDOUS *(OR OTHER)* INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethanolamine	*141-43-5*	*TWA: 3 ppm* *STEL: 6 ppm*	*TWA: 3 ppm* *STEL: 6 ppm*	*<3*

OSHA STANDARDS AND SARA TITLE III DO NOT APPLY TO THIS COSMETIC PRODUCT. COSMETICS AND UNLISTED INGREDIENTS ARE NOT CONSIDERED HAZARDOUS OR REPORTABLE BY ANY FEDERAL (OSHA, WHMIS, SARA, EPCRA, RCRA), ANY STATE OR ANY OTHER RIGHT-TO-KNOW REGULATIONS.

3. HEALTH HAZARD DATA: *THIS SKIN CARE COSMETIC IS NOT HAZARDOUS OR TOXIC UNDER NORMAL USE CONDITIONS.*

ROUTES OF ENTRY: ___ Inhalation ___ Skin *X* Eye *X* Ingestion

CARCINOGENICITY: *X* Not Listed ___ NTP ___ IARC ___ OSHA ___ ACGIH

OVEREXPOSURE: Medical Conditions Aggravated: ***None known*** Potential Effects: ***May cause eye irritation***

4. EMERGENCY AND FIRST AID PROCEDURES: ***EYE CONTACT: Flush immediately and thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact a physician. INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs, lower the person's head below their knees to avoid aspiration. Contact physician or poison control centre.***

5. FIRE FIGHTING OR EXPLOSION DATA:	Flash Point, °F/°C: ***NA*** (PMCC Method)	Flammability Limits:	LEL, % ***NA***	UEL, % ***NA***

EXTINGUISHING MEDIA: Water Fog *X* Alcohol Foam *X* CO_2 *X* Dry Chemical ___ Other *X*

Unusual Fire and Explosion Hazards: ***None known*** NFPA 704 Rating: *0* *0* *0* ***NA***

Special Fire Fighting Procedures: ***None known***

6. ACCIDENTAL RELEASE MEASURES: *NOT REPORTABLE UNDER CERCLA OR SARA TITLE III SECTION 304.*

IF MATERIAL IS RELEASED OR SPILLED: ***Pick up large spills or absorb on inert material. Collect in sealed approved container for disposal. Flush area with water to clean up small amounts and reduce possible slippery floor hazard.***

7. PRECAUTIONS FOR SAFE HANDLING AND USE: *STORE AWAY FROM THE REACH OF SMALL CHILDREN.*

PERSONAL PRECAUTIONS: ***Avoid contact with the eyes. Do not take internally.***

STORAGE AND OTHER PRECAUTIONS: ***Store at ambient indoor conditions. Keep containers sealed.***

8. CONTROL AND PROTECTION MEASURES: *COMPLY IF APPLICABLE EXPOSURE LIMITS SHOWN IN SECTION 2 ABOVE.*

TLV (ACGIH): ***Not Applicable*** PEL (OSHA): ***NA*** TWA: ***None*** STEL: ***None*** Skin Note: ***NA***

VENTILATION: Mechanical: ***Not required if used as directed*** Local: ***Not Required*** Special: ***Not Required***

PERSONAL PROTECTION: Respiratory: ***Not required if used as directed*** Eyes: ***Not Required*** Skin: ***Not Required***

Protective Equipment or Clothing: ***Not Required*** Work/Hygienic Practice: ***Routine personal hygiene***

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point, °F/°C:	*ND*	Melting Point, °F/°C:	*ND*
Vapor Pressure (mm Hg):	*ND*	Specific Gravity (H_2O =1):	*1.0*
Vapor Density (Air =1):	*ND*	Evaporation Rate (H_2O =1):	*ND*
Volatility, %	*>80 (0 VOC)*	pH (undiluted):	*8.5 - 9.2*
Solubility in Water:	*Complete*	Viscosity, cps:	*3,000 - 7,000*

Color/Clarity/Form & Odor: *Clear light amber liquid, floral balsam fragrance*

10. STABILITY AND REACTIVITY DATA

Stability: ***Stable*** Hazardous Polymerization: ***None known*** Conditions to Avoid: ***None known***

Incompatibility (Avoid): ***None known*** Decomposition or By-Products: ***Combustion may produce CO, CO_2, NO_x***

11. TOXICOLOGICAL INFORMATION:

ALSO SEE SECTION 3

NO ACUTE TOXIC EFFECTS EXPECTED BY INHALATION, INGESTION, OR CONTACT DURING ANTICIPATED HANDLING AND USAGE. NO LONG TERM CHRONIC EFFECTS.

Irritant: ***Not a primary irritant*** Sensitization: ***None known*** Synergism: ***None known***

Skin LD50: ***Not Applicable*** Oral LD50: ***ND*** Inhalation LC50: ***Not Applicable***

12. ECOLOGICAL INFORMATION:

NOT EXPECTED TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS. NOT CONSIDERED ENVIRONMENTALLY HARMFUL FROM NORMAL DILUTION, EXPECTED USAGE AND TYPICAL DRAINAGE TO SEWERS, SEPTIC SYSTEMS, AND TREATMENT PLANTS.

POTENTIAL: Biodegradation: ***ND*** Oxygen Depletion: ***ND*** Bioconcentration: ***ND***

AFFECTS: Aquatic Organisms: ***ND*** Waste Plant Microbes: ***ND*** BOD: ***NE*** COD: ***NE***

13. DISPOSAL GUIDELINES:

DISPOSE ACCORDING TO LOCAL, STATE/PROVINCE, FEDERAL & INTERNATIONAL REGULATIONS. NOT A CHARACTERISTIC HAZARDOUS OR LISTED WASTE BY USEPA & RCRA (40CFR PART 261).

14. TRANSPORT REGULATIONS:

NOT HAZARDOUS BY DOT, HM-181, TDG, IATA, & IMO REGULATIONS.

Shipping Class: ***Not regulated as hazardous*** Label: ***Not Applicable*** UN/NA/PIN: ***Not Applicable***

15. REGULATORY CONSIDERATIONS:

NOT REGULATED BY DOT, OSHA, WHMIS, TSCA, SARA, OR STATES.

COSMETICS & INGREDIENTS ARE NOT CONSIDERED HAZARDOUS OR REPORTABLE BY ANY FEDERAL (TSCA, OSHA, WHMIS, SARA, CERCLA, EPCRA, RCRA), ANY STATE, OR ANY OTHER RIGHT-TO-KNOW-REGULATIONS. TSCA, OSHA STANDARDS , SARA TITLE III, AND STATE RIGHT-TO-KNOW LAWS MAKE EXCEPTIONS, EXCLUSIONS AND EXEMPTIONS FOR COSMETIC PRODUCTS THAT ARE REGULATED BY AND LABELED ACCORDING TO THE FOOD AND DRUG ADMINISTRATION (FDA).

TSCA, DSL, EINECS: ***Components of the product are listed, exempted or excluded from these requirements.***

SARA TITLE III: Sec. 302 EHS, TPQ: ***NA*** Sec. 304 EHS, RQ: ***NA*** Sec. 311/312: ***NA*** Sec. 313: ***None***

USA STATE REGULATIONS: Reportable substances present at notification quantities: ***NA and None known***

INTERNATIONAL HAZARD CLASS: Canada (WHMIS or TDG): ***Not a Controlled Product*** EEC: ***Not Regulated***

16. OTHER RELEVANT INFORMATION:

NO DATA AVAILABLE UNLESS SPECIFICALLY INDICATED BELOW.

DATE: *10/10/00* SUPERSEDES: *NEW*

NOTICE: THE INFORMATION HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE AS OF THE DATE OF PREPARATION OF THIS MATERIAL SAFETY DATA SHEET. HOWEVER, NO WARRANTY OR REPRESENTATION , EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE FOREGOING DATA AND SAFETY INFORMATION. THE USER ASSUMES ALL LIABILITY FOR ANY DAMAGE OR INJURY RESULTING FROM ABNORMAL USE FROM ANY FAILURE TO ADHERE TO RECOMMENDED PRACTICES OR FROM ANY HAZARDS INHERENT IN THE NATURE OF THE PRODUCT.

NA=NOT APPLICABLE, ND=NO DATA, NE=NOT ESTABLISHED. FORM COMPLIES WITH OSHA FORM 174, EEC, & DRAFT ANSI FORMATS.

Revision Number: 020.0 **Issue Date:** 04/20/2015

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product identifier used on the label:

Dial Complete® Antibacterial Foaming Hand Wash – Original (Snowman, Candy Cane, Gift, Santa)
Dial Complete® Antibacterial Foaming Hand Wash – Soothing White Tea (Winter White Tea)
Dial Complete® Antibacterial Foaming Hand Wash – Cranberry (Iced Cranberry, Holly Berries)
Dial Complete® Antibacterial Foaming Hand Wash – Spring Water, Coconut Water, Power Berries
Dial Complete® Antibacterial Foaming Lotion Hand Wash – Fresh Pear (Frosted Pear)
Dial Complete® Antibacterial Foaming Lotion Hand Wash – Cool Plum (Sugar Plum)
Dial Complete® Antibacterial Foaming Lotion Hand Wash – Kitchen w/Light Citrus
Dial Complete® Antibacterial Foaming Lotion Hand Soap – For Foodservice
Dial Hello Kitty Antibacterial Foaming Hand Wash
Dial Winter Wonderland Foaming Hand Wash
Dial Holiday Vanilla Foaming Hand Wash

Other means of identification:

1308464, 1048472, 1632047, 1680187 (Original, Snowman, Candy Cane, Gift, Santa); 1352910, 1138978, 1632448, 1680323 (Soothing White Tea, Winter White Tea); 1352909, 1261581, 1632044, 1680208 (Cranberry, Iced Cranberry, Holly Berries); 1627800, 1632539, 1680563, 1748778 (Spring Water); 1709282, 1786857 (Coconut Water); 1757654 (Power Berries); 1308465, 1121765, 1632390, 1680250 (Fresh Pear, Frosted Pear); 1308466, 1121766, 1632225, 1680239, 1714684 (Cool Plum, Sugar Plum); 1352911, 1121763, 1632412, 1680299 (Kitchen w/Light Citrus); 967063 (For Foodservice); 1578292, 1588532, 1632531, 1680528 (Hello Kitty); 1590288, 1590286, 1632483, 1680505 (Winter Wonderland); 1590248, 1590272, 1632501, 1680524 (Holiday Vanilla)

Recommended use of the chemical and restrictions on use: Liquid Antibacterial Hand Soap; No restrictions on use

Name, address and telephone number of the chemical manufacturer:

The Dial Corporation, a Henkel Company
7201 E. Henkel Way
Scottsdale, AZ 85255-9672 USA

CHEMTREC: 1-800-424-9300 (24 hours daily)
Internet: www.henkelna.com

Emergency telephone number: Medical Emergencies: 1-888-689-9082

2. HAZARD IDENTIFICATION

The hazards described in this OSHA Globally Harmonized System Safety Data Sheet (SDS) are not intended for consumers, and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Classification of the substance or mixture in accordance with paragraph (d) of §1910.1200

HAZARD CLASS	HAZARD CATEGORY
EYE IRRITATION	2B

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200

Signal word: WARNING
Hazard Statement(s): Causes eye irritation.
Symbol(s): None

Precautionary Statements:
Prevention: Wash thoroughly after handling.
Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.
Storage: Not prescribed
Disposal: Not prescribed

Hazards not otherwise classified: Not available.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The following chemicals are classified as health hazards in accordance with paragraph (d) of § 1910.1200.

Chemical Name*	CAS Number (Unique Identifier)	Concentration
Sodium xylene suffocate	1300-72-7	10 – 30 %
Oxydipropanol	25265-71-8	5 – 10 %
Glycerol	56-81-5	1 - 5 %
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	61789-40-0	0.1 – 1 %
Methyl 4-hydroxybenzoate	99-76-3	0.1 – 1 %

*The specific chemical identity and/or exact percentage (concentration) of composition has been withheld because a trade secret is claimed in accordance with paragraph (i) of §1910.1200.

4. FIRST AID MEASURES

Description of necessary measures

Inhalation: First aid measures not required.
Skin contact: First aid measures not required. Cosmetic product and therefore not necessary.
Eye contact: Rinse eyes immediately with plenty of water, occasionally lifting upper and lower lids, until no evidence of product remains. Get medical attention if pain or irritation develops.
Ingestion: Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. Contact physician or local poison control center.

Most important symptoms and effects, both acute and delayed

After eye contact: May cause mild irritation. After skin contact: Repeated or prolonged excessive exposure may cause irritation or dermatitis. After ingestion: Nausea and possible vomiting may occur. After inhalation: Unlikely to occur due to the physical properties of the product. At elevated temperatures, vapors or mists may cause irritation.

Indication of any immediate medical attention and special treatment needed

After eye contact: Rinse eyes with plenty of water until no evidence of product remains. After skin contact: Rinse affected area with large amounts of water until no evidence of product remains. After ingestion: Dilution by rinsing the mouth and giving a glass of water to drink is generally recommended. After inhalation: Remove from exposure area to fresh air.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Dry chemical, carbon dioxide, water spray or regular foam.
Unsuitable extinguishing media: None known

Specific hazards arising from the chemical

Irritating smoke, carbon monoxide, and carbon dioxide.

Special protective equipment and precautions for fire-fighters

In case of fire, wear a full-face positive-pressure self-contained breathing apparatus and protective suit. Shut off all ignition sources. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Isolate area. Keep unnecessary personnel away. Avoid breathing vapors, keep upwind.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear skin, eye and respiratory protection as recommended in Section 8. Stop leak if you can do it without risk. Spills present a slipping hazard. Keep unnecessary personnel away. Ventilate spill area if possible. Make sure area is slip-free before re-opening to traffic.

Environmental Precautions

Small or household quantities may be disposed in sewer or other liquid waste system. For larger quantities check with your local water treatment plant.

Methods and materials for containment and cleaning up

SMALL SPILLS: Contain and absorb with sand or other absorbent material and place into clean, dry containers for later disposal. Wash site of spillage thoroughly with water. LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

7. HANDLING AND STORAGE

Precautions for safe handling
Do not get in eyes. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists.

Conditions for safe storage, including any incompatibilities
Store in original containers in a cool dry area. Storage areas for large quantities (warehouse) should be well ventilated. Keep the containers tightly closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

Hazardous Component(s)	ACGIH	OSHA PEL	AIHA WEEL	OTHER
Glycerol	None	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None

Appropriate engineering controls
Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

Individual protection measures

Respiratory: Air contamination monitoring should be carried out where mists or vapors are likely to be generated, to assure that the employees are not exposed to airborne contaminants above the permissible exposure limits.

Eye: Splash-proof safety glasses are required to prevent eye contact where splashing of product may occur.

Hand/Body: Protective gloves are required where repeated or prolonged skin contact may occur.
Protective clothing is required where repeated or prolonged skin contact may occur.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid, colored
Odor: floral, fruity, green.
Odor threshold: Not available
pH: 5.50 - 6.50 (25 °C)
Melting point/ range: Not available.
Boiling point/range: Not available.
Flash point: > 93.3 °C (> 199.94 °F)
Evaporation rate: Not available.
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Solubility in water: Soluble
Partition coefficient (n-octanol/water): Not available.
Autoignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
VOC content: Not available.
Specific gravity: Not available.

10. STABILITY AND REACTIVITY

Reactivity: This product may react with strong alkalies.

Chemical stability: Stable under normal ambient temperature (70°F, 21°C) and pressure (1 atm).

Possibility of hazardous reactions: Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

Conditions to avoid: Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials: Strong oxidizers and alkalis.

Hazardous decomposition products: Thermal decomposition may release toxic and/or hazardous gases, including ammonia.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure including symptoms related to characteristics

Inhalation: Unlikely to occur due to the physical properties of the product. At elevated temperatures, vapors or mists may cause irritation.
Skin contact: Not a hazard under normal use conditions.
Eye contact: May cause mild irritation.
Ingestion: May cause mild gastrointestinal irritation with nausea, vomiting, diarrhea and abdominal pain.
Physical/Chemical: No physical/chemical hazards are anticipated for this product.

Other relevant toxicity information:
This product is a personal care or cosmetic product. The use of this product by consumers is safe under normal and reasonable foreseen use.

Numerical measures of toxicity, including delayed and immediate effect

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Sodium xylene suffocate	None	Irritant
Oxydipropanol	None	Central nervous system, Irritant
Glycerol	None	Blood, Irritant, Kidney, Nuisance dust
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	None	Irritant, Allergen
Methyl 4-hydroxybenzoate	Oral LD50 (RABBIT) = 6.0 g/kg	Irritant, Allergen

Carcinogenicity information

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Sodium xylene suffocate	No	No	No
Oxydipropanol	No	No	No
Glycerol	No	No	No
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	No	No	No
Methyl 4-hydroxybenzoate	No	No	No

Carcinogenicity None of the ingredients in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA).
Mutagenicity None of the ingredients in this product are known to cause mutagenicity.
Toxicity to reproduction None of the ingredients in this product are known to have reproductive, fetal, or developmental hazards.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity:
This product is anticipated to be safe for the environment at concentrations predicted in household settings under normal use conditions. The following toxicity information is available for the hazardous ingredient(s) when used as technical grade and is provided as reference for the occupational settings.

Toxicity to fish:
The aquatic toxicity profile of this product has not been determined.

Toxicity to aquatic invertebrates:
The aquatic toxicity profile of this product has not been determined.

Toxicity to algae:
The aquatic toxicity profile of this product has not been determined.

Persistence and Degradability: The persistence and degradability of this product has not been determined. The hazardous ingredients are readily biodegradable.

Hazardous substances	Result value	Route of application	Species	Method
Sodium xylene suffocate	Readily biodegradable	aerobic	88 %	OECD 301 B (CO2 evolution)
Oxydipropanol	Readily biodegradable	aerobic	64.5 %	OECD 301 F (Respirometry)
Glycerol	Readily biodegradable	aerobic	90 – 94 %	EU Method C.4-E (closed bottle)
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	Readily biodegradable	aerobic	86 %	OECD 301 D (closed bottle)
Methyl 4-hydroxybenzoate	Readily biodegradable	aerobic	92 %	OECD 301 F (Respirometry)

Bioaccumulation Potential: The bioaccumulation potential of this product has not been determined.

Mobility: The mobility of this product (in soil and water) has not been determined.

13. DISPOSAL CONSIDERATIONS

Waste Number and Description: Not applicable, not regulated.

Disposal Considerations:

Disposal of products: This product is not a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations.

Disposal of packages: Place in trash.

Additional information: Observe all federal, state and local regulations when storing or disposing of this substance

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None
Marine pollutant: None

15. REGULATORY INFORMATION

Occupational safety and health act: Hazard Communication Standard, 29 CFR 1910.1200(g) Appendix D: The Occupational Safety and Health Administration (OSHA) require that the Safety Data Sheets (SDSs) are readily accessible to employees for all hazardous chemicals in the workplace. Since the use pattern and exposure in the workplace are generally not consistent with those experienced by consumers, this SDS may contain health hazard information not relevant to consumer use.

United States Regulatory Information:

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302: None above reporting de minimis
CERCLA/SARA Section 311/312: Not available.
CERCLA/SARA Section 313: None above reporting de minimis
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information:

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This safety data sheet contains changes from the previous version in sections: 2, 4, 11, 12

Prepared by: R&D Support Services

Issue date: 04/20/2015 **Supercedes:** Rev. 19, 08/06/2014

Revision Number: 036.0 **Issue Date:** 04/20/2015

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product identifier used on the label:

Dial® Antibacterial Hand Soap – Mountain Fresh, Spring Water, Pomegranate and Tangerine, Gold, Aloe
Dial® Antibacterial Hand Soap – White Tea & Vitamin E (Fresh Snow)
Berkley & Jensen® Antibacterial Liquid Hand Soap
Dial® Antibacterial Hand Soap – Hello Kitty
Dial® Seasonals Collection Antibacterial Liquid Hand Soap – Blackberry & Coriander, Red Grapes & Mint, Cranberry & Fig, Spiced Apple & Pear, Tropical Bloom, Fruit Splash, Exotic Escape, Refreshing Escape
Dial® Skin Therapy Antibacterial Liquid Hand Soap - Himalayan Pink Salt
Dial® Lavender & Twilight Jasmine Antibacterial Liquid Hand Soap
Dial® Gold Antibacterial Hand Soap – Professional
Liquid Dial® with Moisturizers
Liquid Dial® Sensitive Skin

Other means of identification:

714729, 1631912 (Mountain Fresh); 1533782, 714757, 1631890, 1763465 (Spring Water); 1112000, 1151446, 1631899 (Pomegranate and Tangerine); 1198192, 1305319, 1632015, 1679927 (Gold); 1198180, 1305318, 1632019, 1661407, 1679939, 1763472 (Aloe); 1362663, 1631897 (White Tea & Vitamin E, Fresh Snow); 1365866 (Berkley & Jensen); 1605423, 1606021, 1631872 (Hello Kitty); 1693185 (SC Blackberry & Coriander), 1693201 (SC Red Grapes & Mint), 1713197 (SC Cranberry & Fig); 1713166 (SC Spiced Apple & Pear); 1742158 (SC Tropical Bloom); 1729985 (SC Fruit Splash); 1802082 (Exotic Escape); 1802073 (Refreshing Escape); 1715643 (Skin Therapy - Himalayan Pink Salt), 1778120 (Lavender & Twilight Jasmine); 1679927 (Professional); 1756809 (w/Moisturizers); 1756400 (Sensitive Skin)

Recommended use of the chemical and restrictions on use:

Liquid Antibacterial Hand Soap; No restrictions on use

Name, address and telephone number of the chemical manufacturer:

The Dial Corporation, a Henkel Company
7201 E. Henkel Way
Scottsdale, AZ 85255-9672 USA

CHEMTREC: 1-800-424-9300 (24 hours daily)
Internet: www.henkelna.com

Emergency telephone number: Medical Emergencies: 1-888-689-9082

2. HAZARD IDENTIFICATION

The hazards described in this OSHA Globally Harmonized System Safety Data Sheet (SDS) are not intended for consumers, and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Classification of the substance or mixture in accordance with paragraph (d) of §1910.1200

HAZARD CLASS	HAZARD CATEGORY
None	None

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200

Signal word: Not prescribed
Hazard Statement(s): Not prescribed
Symbol(s): None

Precautionary Statements:
Prevention: Not prescribed
Response: Not prescribed
Storage: Not prescribed
Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Hazards not otherwise classified: Not available.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The following chemicals are classified as health hazards in accordance with paragraph (d) of § 1910.1200.

Chemical Name*	CAS Number (Unique Identifier)	Concentration
Alcohols, C10-16, ethoxylated, sulfates, sodium salts, 2EO	68585-34-2	5 – 10 %
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	61789-40-0	1 – 5 %

*The specific chemical identity and/or exact percentage (concentration) of composition has been withheld because a trade secret is claimed in accordance with paragraph (i) of §1910.1200.

4. FIRST AID MEASURES

Description of necessary measures

Inhalation: First aid measures not required.
Skin contact: First aid measures not required. Cosmetic product and therefore not necessary.
Eye contact: Rinse eyes immediately with plenty of water, occasionally lifting upper and lower lids, until no evidence of product remains. Get medical attention if pain or irritation develops.
Ingestion: Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. Contact physician or local poison control center.

Most important symptoms and effects, both acute and delayed

After eye contact: May cause mild transient irritation. After skin contact: Repeated or prolonged excessive exposure may cause irritation or dermatitis. After ingestion: Nausea and possible vomiting may occur. After inhalation: Unlikely to occur due to the physical properties of the product. At elevated temperatures, vapors or mists may cause irritation.

Indication of any immediate medical attention and special treatment needed

After eye contact: Rinse eyes with plenty of water until no evidence of product remains. After skin contact: Rinse affected area with mild soap and water until no evidence of product remains. After ingestion: Dilution by rinsing the mouth and giving a glass of water to drink is generally recommended. After inhalation: Remove from exposure area to fresh air.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Dry chemical, carbon dioxide, water spray or regular foam.
Unsuitable extinguishing media: None known

Specific hazards arising from the chemical

Oxides of carbon and oxides of nitrogen.

Special protective equipment and precautions for fire-fighters

In case of fire, wear a full-face positive-pressure self-contained breathing apparatus and protective suit. Shut off all ignition sources. Move containers from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Use flooding amounts of water as a fog, solid streams may be ineffective. Avoid breathing hazardous vapors, keep upwind.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear skin, eye and respiratory protection as recommended in Section 8. Stop or reduce any leaks if it is safe to do so. Spills present a slipping hazard. Keep unnecessary personnel away. Ventilate spill area if possible. Make sure area is slip-free before re-opening to traffic.

Environmental Precautions

Small or household quantities may be disposed in sewer or other liquid waste system. For larger quantities check with your local water treatment plant.

Methods and materials for containment and cleaning up

SMALL SPILLS: Contain and absorb with absorbent material and place into containers for later disposal. Wash site of spillage thoroughly with water. LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not get in eyes. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists.

Conditions for safe storage, including any incompatibilities

Store in original containers in a cool dry area. Storage areas for large quantities (warehouse) should be well ventilated. Keep the containers tightly closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

Hazardous Component(s)	ACGIH	OSHA PEL	AIHA WEEL	OTHER
Alcohols, C10-16, ethoxylated, sulfates, sodium salts, 2EO	None	None	None	None

Appropriate engineering controls
Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

Individual protection measures

Respiratory: Air contamination monitoring should be carried out where mists or vapors are likely to be generated, to assure that the employees are not exposed to airborne contaminants above the permissible exposure limits.

Eye: Splash-proof safety glasses are required to prevent eye contact where splashing of the product may occur.

Hand/Body: Protective gloves are required where repeated or prolonged skin contact may occur.
Protective clothing is required where repeated or prolonged skin contact may occur.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid, colorless
Odor: citric, green, fresh
Odor threshold: Not available.
pH: 5.20 - 6.20 (25 °C)
Melting point/ range: Not available.
Boiling point/range: Not available.
Flash point: > 93.3 °C (> 199.94 °F)
Evaporation rate: Not available.
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Solubility in water: Soluble
Partition coefficient (n-octanol/water): Not available.
Autoignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: 3,000 – 8,000 mPas
VOC content: Not available.
Specific gravity: 1.024 at 20 °C (68°F)

10. STABILITY AND REACTIVITY

Reactivity: This product may react with strong alkalies.

Chemical stability: Stable under normal ambient temperature (70°F, 21°C) and pressure (1 atm).

Possibility of hazardous reactions: Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

Conditions to avoid: Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials: Strong oxidizers and alkalis.

Hazardous decomposition products: Thermal decomposition may release toxic and/or hazardous gases, including ammonia.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure including symptoms related to characteristics

Inhalation: Unlikely to occur due to the physical properties of the product. At elevated temperatures, vapors or mists may cause irritation.
Skin contact: Not a hazard under normal use conditions.
Eye contact: This product may cause slight irritation.
Ingestion: May cause mild gastrointestinal irritation with nausea, vomiting, diarrhea and abdominal pain.
Physical/Chemical: No physical/chemical hazards are anticipated for this product.

Other relevant toxicity information:
This product is a personal care or cosmetic product. Direct contact with eyes may cause irritation. No adverse effects are anticipated to skin from normal use.

Numerical measures of toxicity, including delayed and immediate effect

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Alcohols, C10-16, ethoxylated, sulfates, sodium salts, 2EO	None	Irritant
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	None	Irritant, Allergen

Carcinogenicity information

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Alcohols, C10-16, ethoxylated, sulfates, sodium salts, 2EO	No	No	No
1-Propanaminium, 3-amino-N- (carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	No	No	No

Carcinogenicity None of the ingredients in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA).
Mutagenicity None of the ingredients in this product are known to cause mutagenicity.
Toxicity to reproduction None of the ingredients in this product are known to have reproductive, fetal, or developmental hazards.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity:
This product is anticipated to be safe for the environment at concentrations predicted in household settings under normal use conditions.

Toxicity to fish:
The aquatic toxicity profile of this product has not been determined.

Toxicity to aquatic invertebrates:
The aquatic toxicity profile of this product has not been determined.

Toxicity to algae:
The aquatic toxicity profile of this product has not been determined.

Persistence and Degradability: The persistence and degradability of this product has not been determined. The hazardous ingredients are readily biodegradable.

Hazardous substances	Result value	Route of application	Species	Method
Alcohols, C10-16, ethoxylated, sulfates, sodium salts, 2EO	Readily biodegradable	aerobic	80 – 83 %	OECD 301 B (CO2 evolution)
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,Ndimethyl-,N-coco acyl derivs., hydroxides, inner Salts	Readily biodegradable	aerobic	86 %	OECD 301 D (closed bottle)

Bioaccumulation Potential: The bioaccumulation potential of this product has not been determined.

Mobility: The mobility of this product (in soil and water) has not been determined.

13. DISPOSAL CONSIDERATIONS

Waste Number and Description: Not applicable, not regulated.

Disposal Considerations:
Disposal of products: This product is not a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations.
Disposal of packages: Place in trash.

Additional information: Observe all federal, state and local regulations when storing or disposing of this substance

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)
Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name:	None
Hazard class or division:	None
Identification number:	None
Packing group:	None

Water Transportation (IMO/IMDG)

Proper shipping name:	None
Hazard class or division:	None
Identification number:	None
Packing group:	None
Marine pollutant:	None

15. REGULATORY INFORMATION

Occupational safety and health act: Hazard Communication Standard, 29 CFR 1910.1200(g) Appendix D: The Occupational Safety and Health Administration (OSHA) require that the Safety Data Sheets (SDSs) are readily accessible to employees for all hazardous chemicals in the workplace. Since the use pattern and exposure in the workplace are generally not consistent with those experienced by consumers, this SDS may contain health hazard information not relevant to consumer use.

United States Regulatory Information:

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Not available.
CERCLA/SARA Section 313:	None above reporting de minimis
California Proposition 65:	No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information:

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This safety data sheet contains changes from the previous version in sections: 2, 12

Prepared by: R&D Support Services

Issue date: 04/20/2015 **Supercedes:** Rev. 35, 08/06/2014

MATERIAL SAFETY DATA SHEET
MSDS L-123 REVISION 15

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

The Dial Corporation
19001 N. Scottsdale Road
Scottsdale, Arizona 85255-9672

Medical Emergencies: 1-888-689-9082
Chemtrec: 1-800-424-9300 (24 Hours Daily)
Other Information: 1-888-468-6673

PRODUCT: Liquid Hand Soap

DATE OF ISSUE: April 22, 2010

TRADE NAMES/SYNONYMS: Pure and Natural® Lotion Soap
Dial® Basics Liquid Hand Soap

CHEMICAL FAMILY: Mixture

I.D. NUMBERS: 901763 (Pure & Natural Lotion Soap, CMD, Dial Basics), 99102677 (Pure & Natural Lotion Soap, DMD, Dial Basics)

SECTION 2: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION: This product is an opaque, white liquid with a pleasant fragrance. Direct contact with eyes may cause irritation. Repeated or prolonged excessive contact with skin may cause irritation or dermatitis. No significant environmental effects. Not a fire hazard. Product is stable.

This product is labeled in accordance with guidelines set forth in the Food, Drug, and Cosmetic Act. The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this Material Safety Data Sheet may differ from the requirements of the FD&C Act and as a result, this MSDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

REGULATORY STATUS

While this product is not considered to be hazardous under OSHA's Hazard Communication Standard (29 CFR 1900.1200), this MSDS includes valuable information that is critical for safe handling and proper use of this product. This MSDS should be retained and available for employees and other users of this product.

POTENTIAL HEALTH EFFECTS

NOTE: The acute health effects described below are those which could potentially occur for the finished product. They are based on the toxicology information available for the finished product and/or each hazardous ingredient, and are consistent with the product type and the likelihood of a specific route of exposure. Known chronic health effects related to exposure to a specific ingredient are indicated.

EYE CONTACT: This product may cause irritation.

SKIN CONTACT: Repeated or prolonged excessive contact may cause irritation or dermatitis.

INGESTION: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

INHALATION: Unlikely to occur due to the physical properties of the product.

CHRONIC HEALTH EFFECTS: None known.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE: Pre-existing skin conditions.

POTENTIAL ENVIRONMENTAL EFFECTS

See Section 12: Ecological Information.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Based on our hazard evaluation, the following chemical substance(s) in this product have been identified as hazardous.

INGREDIENT	CAS NUMBER	PERCENT (w/w)
Sodium Laureth Sulfate	9004-82-4	1 – 5 %
Ammonium Lauryl Sulfate	2235-54-3	1 – 5 %
Lauramide DEA	120-40-1	1 – 5 %
Glycerin	56-81-5	1 – 5 %

SECTION 4: FIRST AID MEASURES

EYES: Rinse eyes immediately with plenty of water, occasionally lifting upper and lower lids, until no evidence of product remains. Get medical attention if pain or irritation persists.

SKIN: Rinse affected area with plenty of water until no evidence of product remains. Get medical attention if irritation persists.

INGESTION: Treat symptomatically and supportively. Maintain airway and respiration. If vomiting occurs, keep head below hips to prevent aspiration. Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. If unconscious, the victim should not be given anything to drink. Contact physician or local poison control center.

INHALATION: Remove from exposure area to fresh air. Keep affected person warm and at rest. Treat symptomatically and supportively. Contact physician or local poison control center. If breathing has stopped, give artificial respiration, and get medical attention immediately.

NOTE TO PHYSICIAN: The physician's judgment should be used to control symptoms and clinical condition based on the individual reactions of the patient.

SECTION 5: FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

OSHA FLAMMABILITY CLASSIFICATION: Not applicable FLASH POINT: None

UPPER FLAMMABILITY LIMIT: Not applicable LOWER FLAMMABILITY LIMIT: Not applicable

AUTO-IGNITION TEMPERATURE: Not applicable

FIRE AND EXPLOSION HAZARD: Negligible fire hazard when exposed to heat or flame.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and oxides of nitrogen.

EXTINGUISHING MEDIA

Dry chemical, carbon dioxide, water spray or regular foam.

PROTECTION OF FIREFIGHTERS

In case of fire, wear a full-face positive-pressure self-contained breathing apparatus and protective suit. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Use flooding amounts of water as a fog, solid streams may be ineffective. Avoid breathing vapors; keep upwind.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear skin, eye and respiratory protection as recommended in Section 8. Stop or reduce any leaks if it is safe to do so. Spills present a slipping hazard. Keep unnecessary personnel away. Ventilate spill area if possible. Make sure area is slip-free before re-opening to traffic.

ENVIRONMENTAL PRECAUTIONS
Small or household quantities may be disposed in sewer or other liquid waste system. For larger quantities check with your local water treatment plant.

METHODS FOR CONTAINMENT AND CLEAN UP
SMALL SPILLS: Contain and absorb with absorbent material and place into containers for later disposal. Wash site of spillage thoroughly with water. LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

SECTION 7: HANDLING AND STORAGE

HANDLING:
Do not get in eyes. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists.

STORAGE:
Store in original containers in a cool dry area. Store away from incompatible substances and excessive heat. Storage areas for large quantities (warehouse) should be well ventilated. Keep the containers tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

This product is a personal care or cosmetic product. The use of this product by consumers is safe under normal and reasonable foreseen use. The information provided below refers to the occupational settings.

WORKER EXPOSURE LIMITS:
The following exposure limits exist for the ingredients listed below. The TLV-TWA is the ACGIH Threshold Limit Value – Time Weighted Average. TLV-Ceiling Limit is the ACGIH Threshold Limit Value – Ceiling Limit. PEL-TWA is the OSHA Permissible Exposure Limit.

INGREDIENT	CAS NUMBER	EXPOSURE LIMIT
Glycerin (as mist)	56-81-5	TLV-TWA: 10 mg/m^3 (mist), PEL-TWA: 5 mg/m^3 (respirable fraction); 15 mg/m^3 (total mist)

ENGINEERING CONTROLS: Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

RESPIRATOR: Air contamination monitoring should be carried out where mists or vapors are likely to be generated, to assure that the employees are not exposed to airborne contaminants above the permissible exposure limits. If respiratory protection is required, it must be based on the contamination levels found in the workplace, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

FOR FIRE FIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS: Any self-contained breathing apparatus that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure demand or other positive-pressure mode.

CLOTHING: Protective clothing is required where repeated or prolonged skin contact may occur.

GLOVES: Chemical-resistant gloves are required where repeated or prolonged skin contact may occur.

EYE/FACE PROTECTION: Splash-proof safety glasses are required to prevent eye contact where splashing of product may occur.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Opaque, white		
ODOR/ODOR THRESHOLD:	Pleasant fragrance added	PHYSICAL STATE:	Liquid
pH (@ 25°C):	6.4 - 6.7	VAPOR DENSITY:	Not available
BOILING POINT:	>200 °F (93 °C)	VAPOR PRESSURE:	Not available
MELTING/FREEZING POINT:	Not available	FLASH POINT:	See Section 5.

FLAMMABLE PROPERTIES: See Section 5. SOLUBILITY IN WATER: Nearly Complete

DENSITY/SPECIFIC GRAVITY: 1.018 @ 25°C EVAPORATION RATE: Not available

OCTANOL/WATER PARTITION COEFFICIENT (K_{ow}): Not available

VISCOSITY: 2500-4500 cps @ 25°C (Brookfield LVF, Spindle #3, 12 rpm)

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal ambient temperature (70°F, 21°C) and pressure (1 atm).

CONDITIONS TO AVOID: Avoid storing in direct sunlight and avoid extremes of temperature.

INCOMPATIBLE MATERIALS: Strong oxidizers, acids.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may release toxic and/or hazardous gases, including ammonia.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION SUMMARY: This product is a personal care or cosmetic product. The use of this product by consumers is safe under normal and reasonable foreseen use. Direct contact with eyes may cause irritation. Repeated or prolonged excessive contact with skin may cause irritation or dermatitis.

COMPONENT ANALYSIS: The following toxicity information is for the hazardous ingredient(s) when used as technical grade and is provided as reference for the occupational settings.

INGREDIENT	LD50 / DRAIZE SCORE	TOXICITY / IRRITATION RATING
ACUTE ORAL TOXICITY		
Lauramide DEA	2,700 mg/kg (rat)	Moderately Toxic
Sodium Laureth Sulfate	1,600 mg/kg (rat)	Moderately Toxic
Glycerin	12,600 mg/kg (rat)	Non-hazardous
ACUTE DERMAL TOXICITY		
Glycerin	> 10,000 mg/kg (rabbit)	Non-hazardous
ACUTE INHALATION TOXICITY		
Glycerin	> 570 mg/m^3 (rat)	Toxic

SENSITIZATION: This product is not considered a skin or respiratory sensitizer.

CARCINOGENICITY: None of the ingredients in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA).

MUTAGENICITY: None of the ingredients in this product are known to cause mutagenicity.

REPRODUCTIVE/FETAL/DEVELOPMENTAL TOXICITY: None of the ingredients in this product are known as reproductive, fetal, or developmental hazards.

TARGET ORGAN TOXICITY: None of the ingredients in this product are known to have target organ toxicity.

EPIDEMIOLOGICAL INFORMATION: None of the ingredients in this product are known to have health-related information in working populations.

SECTION 12: ECOLOGICAL INFORMATION

This product is anticipated to be safe for the environment at concentrations predicted in household settings under normal use conditions. The following toxicity information is available for the hazardous ingredient(s) when used as technical grade and is provided as reference for the occupational settings.

PRODUCT / INGREDIENT	LC50/EC50 (ANIMAL SPECIE)	TOXICITY RATING

VERTEBRATES		
Glycerin	96-hr LC50: 50 mg/L (Oncorhynchus mykiss)	Harmful
Dial Basics Foaming Soap	96-hr LC50: > 1000 mg/L (Rainbow trout)	Non-hazardous
INVERTEBRATES		
Glycerin	24-hr EC50: > 500 mg/L (Daphnia magna)	Practically Non-Hazardous
BACTERIA		
Dial Basics Foaming Soap	15-Min IC50: > 1000 mg/L (Vibrio fischeri)	Practically Non-Hazardous

ENVIRONMENTAL FATE: The product is readily biodegradable with 88.8% biodegradation over 28 days (OECD 301D).

PERSISTENCE AND DEGRADABILITY: This product will not persist in the environment based on biodegradability data.

BIOACCUMULATION POTENTIAL: The bioaccumulation potential of this product has not been determined.

MOBILITY: The mobility of this product (in soil and water) has not been determined.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE NUMBER AND DESCRIPTION: Not applicable, not regulated.

DISPOSAL CONSIDERATIONS: This product is not a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations.

SECTION 14: TRANSPORT INFORMATION

GROUND TRANSPORT

DOT Hazard Class:	Not regulated	Packing Group:	Not applicable
DOT Proper Shipping Name:	Not applicable	Shipping Label Information:	Not applicable
UN/NA Number:	Not applicable		

AIR TRANSPORT (ICAO/IATA)		**MARINE TRANSPORT (IMDG/IMO)**	
ICAO/IATA Hazard Class:	Not regulated	IMDG/IMO Hazard Class:	Not regulated
ICAO/IATA Proper Shipping Name:	Not applicable	IMDG/IMO Proper Shipping Name:	Not applicable

SECTION 15: REGULATORY INFORMATION

UNITED STATES:

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
The Occupational Safety and Health Administration requires Material Safety Data Sheets to provide any hazards that may be associated with the product, and make this information available in the workplace. Since the use pattern and exposure in the workplace are generally not consistent with those experienced by consumers, this MSDS may contain additional health hazard information not pertinent to consumer use.

FOOD AND DRUG ADMINISTRATION:
This product is regulated as a cosmetic under the Food and Drug Administration.

EPA - SARA TITLE III SECTION 313: Not applicable - Consumer product.

EPA CERCLA/SARA TITLE III SUPERFUND AMENDMENT AND REAUTHORIZATION ACT:
This product contains no CERCLA/SARA Title III materials. This product contains no hazardous chemicals reportable under Sections 311/312. This product contains no hazardous chemicals reportable under Section 304.

TSCA: All components of this product are either listed on or exempt from the U.S. Toxic Substances Control Act (TSCA) chemical substance inventory.

STATE REGULATIONS
CALIFORNIA PROPOSITION 65: This product does not contain substances listed under California Proposition 65.

CANADA:

CANADIAN ENVIRONMENTAL PROTECTION ACT:

INVENTORY STATUS: Some components of this product are not listed on the Canadian Domestic Substances List (DSL) nor the NDSL.

HEALTH CANADA:
This product is regulated as a cosmetic product under the Cosmetics Programme.

WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM:
WHMIS CLASSIFICATION: Not subject to classification.

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, The Dial Corporation makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, The Dial Corporation will not be responsible for damages of any kind resulting from the use of or reliance upon such information. No representations, or warranties, either expressed or implied of merchantability, fitness for a particular purpose or of any other nature is made hereunder with respect to the information set forth herein or to the product to which the information refers.

NFPA RATINGS (Scale 0-4, where 4=high degree of hazard): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0
HMIS RATINGS (Scale 0-4, where 4=severe hazard): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0

MSDS CREATION DATE: 02/09/94
SUPERCEDES: 08/27/09, Ver. 14
REVISION DATE: 09/21/09
REVISION: Updated Physical/Chem Properties and Ecological Information.

MATERIAL SAFETY DATA SHEET
MSDS L-108 REVISION 18

THE DIAL CORPORATION
TECHNICAL AND ADMINISTRATIVE CENTER
15101 NORTH SCOTTSDALE ROAD
SCOTTSDALE, ARIZONA 85254-9934

MEDICAL EMERGENCIES: 1-888-689-9082
CHEMTREC: 1-800-424-9300 (24 Hours Daily)
OTHER INFORMATION: 1-888-468-6673

SUBSTANCE IDENTIFICATION

SUBSTANCE: LIQUID ANTIBACTERIAL SOAP

TRADE NAMES/SYNONYMS: **DIAL ANTIBACTERIAL LIQUID HAND SOAP (GOLD); MOISTURIZING DIAL ANTIBACTERIAL LIQUID SOAP; DIAL MOISTURIZING ALOE ANTIBACTERIAL LIQUID HAND SOAP**

CHEMICAL FAMILY: Mixture

I.D. NUMBERS: 901726, 901761, 901785, 901788 (Liquid Dial); 901727, 901751, 906466, 906469 (Moisturizing Liquid Dial); 99100787 (Dial Moisturizing Aloe)

NFPA RATINGS (Scale 0-4, where 4=high degree of hazard): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0
HMIS RATINGS (Scale 0-4, where 4=severe hazard): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0

This product is labeled in accordance with guidelines set forth in the Food, Drug, and Cosmetic Act. The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this Material Safety Data Sheet may differ from the requirements of the FD & C Act and as a result, this MSDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

HAZARDOUS INGREDIENTS INFORMATION

COMPONENT: AMMONIUM LAURYL SULFATE — CAS# 2235-54-3

COMPONENT: COCAMIDOPROPYL BETAINE — CAS# 61789-40-0

COMPONENT: C_{8-10} & C_{10-16} POLYGLYCOSIDES (DECYL POLYGLUCOSE) — CAS# 66515-73-1 & 110615-47-9 (mixture)

COMPONENT: GLYCERIN — CAS# 56-81-5
(as mist):
5 mg/m^3 OSHA TWA (respirable fraction); 10 mg/m^3 OSHA TWA (total mist)
10 mg/m^3 ACGIH TWA (total mist)

COMPONENT: LAURAMIDE DEA — CAS# 120-40-1

COMPONENT: SODIUM LAURETH SULFATE — CAS# 9004-82-4

Carcinogen status of components: Not listed as carcinogenic by NTP, IARC, or OSHA.

PHYSICAL AND CHEMICAL DATA

DESCRIPTION: Clear gold, beige or peach liquid with a pleasant fragrance.

BOILING POINT: >200°F (>93°C)

SPECIFIC GRAVITY: 1.017-1.026 @ 25°C

pH (as is): 5.8-6.9 @ 25°C

VISCOSITY: 3000-13,000 cps @ 25°C
(Brookfield LVF, Spindle #3, 12 rpm)

SOLUBILITY IN WATER: Complete.

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD - Negligible fire hazard when exposed to heat or flame.

FIRE FIGHTING MEDIA - Dry chemical, carbon dioxide, water spray or regular foam.

FIRE FIGHTING - Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Avoid breathing vapors, keep upwind.

HEALTH HAZARD DATA

NOTE: The acute health effects described below are those which could potentially occur for the finished product. They are based on the toxicology information available for the finished product and/or each hazardous ingredient, and are consistent with the product type and the likelihood of a specific route of exposure. Known chronic health effects related to exposure to a specific ingredient are indicated.

ACUTE HEALTH EFFECTS:

INHALATION: Unlikely to occur due to the physical properties of the product.

SKIN CONTACT: Repeated or prolonged excessive exposure may cause irritation or dermatitis.

EYE CONTACT: May cause moderate to severe irritation, with possibility of corneal injury.

INGESTION: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: None known.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE: Pre-existing skin conditions.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Immediately remove from exposure area to fresh air . Keep affected person warm and at rest. Treat symptomatically and supportively. Contact physician or local poison control center. If breathing has stopped, give artificial respiration, and get medical attention immediately.

SKIN CONTACT: Rinse affected area with plenty of water until no evidence of product remains. Get medical attention if irritation persists.

EYE CONTACT: Immediately rinse eyes with plenty of water, occasionally lifting upper and lower lids, until no evidence of product remains. Get medical attention if pain or irritation persist.

INGESTION: Treat symptomatically and supportively. Maintain airway and respiration. If vomiting occurs, keep head below hips to prevent aspiration. Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. If unconscious, the victim should not be given anything to drink. Contact physician or local poison control center.

REACTIVITY

REACTIVITY - Stable under normal temperatures and pressures.

INCOMPATIBILITIES: Strong oxidizers, acids, peroxides.

DECOMPOSITION - Thermal decomposition may release toxic and/or hazardous gases, including oxides of carbon, sulfur and nitrogen, ammonia.

POLYMERIZATION - Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

STORAGE AND DISPOSAL

Store away from incompatible substances. Observe all federal, state and local regulations when storing or disposing of this substance.

CONDITIONS TO AVOID

Avoid contact with excessive heat and incompatible substances.

SPILL AND LEAK PROCEDURES

OCCUPATIONAL SPILL - Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into containers for later disposal. For larger spills, dike far ahead of spill for later disposal. Keep unnecessary people away; isolate hazard area and restrict entry.

OCCUPATIONAL PROTECTIVE EQUIPMENT

VENTILATION - Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

RESPIRATOR - Air contamination monitoring should be carried out where mists or vapors are likely to be generated, to assure that the employees are not exposed to airborne contaminants above the permissible exposure limits. If respiratory protection is required, it must be based on the contamination levels found in the workplace, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

FOR FIRE FIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS - Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

CLOTHING - Protective clothing is required where repeated or prolonged skin contact may occur.

GLOVES - Chemical-resistant gloves are required where repeated or prolonged skin contact may occur.

EYE PROTECTION - Safety glasses are required to prevent eye contact where splashing of product may occur.

REGULATORY INFORMATION

DOT FLAMMABILITY CLASSIFICATION: Not applicable.

EPA - SARA TITLE III SECTION 313: Not applicable - Consumer product.

TSCA:	All components of this product are listed or are exempted or excluded from listing on the U.S. Toxic Substances Control Act (TSCA) chemical substance inventory.

The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, The Dial Corporation makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, The Dial Corporation will not be responsible for damages of any kind resulting from the use of or reliance upon such information. No representations, or warranties, either expressed or implied of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information set forth herein or to the product to which the information refers.

MSDS CREATION DATE: 04/24/92
SUPERSEDES: 10/11/01 Rev. 17
REVISION DATE: 07/12/02
REVISION: Updated Substance Identification, Health Hazard Data and Fire & Explosion Data Sections.

MATERIAL SAFETY DATA SHEET
MSDS L-108 REVISION 18

THE DIAL CORPORATION
TECHNICAL AND ADMINISTRATIVE CENTER
15101 NORTH SCOTTSDALE ROAD
SCOTTSDALE, ARIZONA 85254-9934

MEDICAL EMERGENCIES: 1-888-689-9082
CHEMTREC: 1-800-424-9300 (24 Hours Daily)
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SUBSTANCE IDENTIFICATION

SUBSTANCE: LIQUID ANTIBACTERIAL SOAP

TRADE NAMES/SYNONYMS: **DIAL ANTIBACTERIAL LIQUID HAND SOAP (GOLD); MOISTURIZING DIAL ANTIBACTERIAL LIQUID SOAP; DIAL MOISTURIZING ALOE ANTIBACTERIAL LIQUID HAND SOAP**

CHEMICAL FAMILY: Mixture

I.D. NUMBERS: 901726, 901761, 901785, 901788 (Liquid Dial); 901727, 901751, 906466, 906469 (Moisturizing Liquid Dial); 99100787 (Dial Moisturizing Aloe)

NFPA RATINGS (Scale 0-4, where 4=high degree of hazard): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0
HMIS RATINGS (Scale 0-4, where 4=severe hazard): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0

This product is labeled in accordance with guidelines set forth in the Food, Drug, and Cosmetic Act. The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this Material Safety Data Sheet may differ from the requirements of the FD & C Act and as a result, this MSDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

HAZARDOUS INGREDIENTS INFORMATION

COMPONENT: AMMONIUM LAURYL SULFATE — CAS# 2235-54-3

COMPONENT: COCAMIDOPROPYL BETAINE — CAS# 61789-40-0

COMPONENT: C_{8-10} & C_{10-16} POLYGLYCOSIDES (DECYL POLYGLUCOSE) — CAS# 66515-73-1 & 110615-47-9 (mixture)

COMPONENT: GLYCERIN — CAS# 56-81-5
(as mist):
5 mg/m^3 OSHA TWA (respirable fraction); 10 mg/m^3 OSHA TWA (total mist)
10 mg/m^3 ACGIH TWA (total mist)

COMPONENT: LAURAMIDE DEA — CAS# 120-40-1

COMPONENT: SODIUM LAURETH SULFATE — CAS# 9004-82-4

Carcinogen status of components: Not listed as carcinogenic by NTP, IARC, or OSHA.

PHYSICAL AND CHEMICAL DATA

DESCRIPTION: Clear gold, beige or peach liquid with a pleasant fragrance.

BOILING POINT: >200°F (>93°C)

SPECIFIC GRAVITY: 1.017-1.026 @ 25°C

pH (as is): 5.8-6.9 @ 25°C

VISCOSITY: 3000-13,000 cps @ 25°C
(Brookfield LVF, Spindle #3, 12 rpm)

SOLUBILITY IN WATER: Complete.

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD - Negligible fire hazard when exposed to heat or flame.

FIRE FIGHTING MEDIA - Dry chemical, carbon dioxide, water spray or regular foam.

FIRE FIGHTING - Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Avoid breathing vapors, keep upwind.

HEALTH HAZARD DATA

NOTE: The acute health effects described below are those which could potentially occur for the finished product. They are based on the toxicology information available for the finished product and/or each hazardous ingredient, and are consistent with the product type and the likelihood of a specific route of exposure. Known chronic health effects related to exposure to a specific ingredient are indicated.

ACUTE HEALTH EFFECTS:

INHALATION: Unlikely to occur due to the physical properties of the product.

SKIN CONTACT: Repeated or prolonged excessive exposure may cause irritation or dermatitis.

EYE CONTACT: May cause moderate to severe irritation, with possibility of corneal injury.

INGESTION: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: None known.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE: Pre-existing skin conditions.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Immediately remove from exposure area to fresh air . Keep affected person warm and at rest. Treat symptomatically and supportively. Contact physician or local poison control center. If breathing has stopped, give artificial respiration, and get medical attention immediately.

SKIN CONTACT: Rinse affected area with plenty of water until no evidence of product remains. Get medical attention if irritation persists.

EYE CONTACT: Immediately rinse eyes with plenty of water, occasionally lifting upper and lower lids, until no evidence of product remains. Get medical attention if pain or irritation persist.

INGESTION: Treat symptomatically and supportively. Maintain airway and respiration. If vomiting occurs, keep head below hips to prevent aspiration. Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. If unconscious, the victim should not be given anything to drink. Contact physician or local poison control center.

REACTIVITY

REACTIVITY - Stable under normal temperatures and pressures.

INCOMPATIBILITIES: Strong oxidizers, acids, peroxides.

DECOMPOSITION - Thermal decomposition may release toxic and/or hazardous gases, including oxides of carbon, sulfur and nitrogen, ammonia.

POLYMERIZATION - Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

STORAGE AND DISPOSAL

Store away from incompatible substances. Observe all federal, state and local regulations when storing or disposing of this substance.

CONDITIONS TO AVOID

Avoid contact with excessive heat and incompatible substances.

SPILL AND LEAK PROCEDURES

OCCUPATIONAL SPILL - Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into containers for later disposal. For larger spills, dike far ahead of spill for later disposal. Keep unnecessary people away; isolate hazard area and restrict entry.

OCCUPATIONAL PROTECTIVE EQUIPMENT

VENTILATION - Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

RESPIRATOR - Air contamination monitoring should be carried out where mists or vapors are likely to be generated, to assure that the employees are not exposed to airborne contaminants above the permissible exposure limits. If respiratory protection is required, it must be based on the contamination levels found in the workplace, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

FOR FIRE FIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS - Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

CLOTHING - Protective clothing is required where repeated or prolonged skin contact may occur.

GLOVES - Chemical-resistant gloves are required where repeated or prolonged skin contact may occur.

EYE PROTECTION - Safety glasses are required to prevent eye contact where splashing of product may occur.

REGULATORY INFORMATION

DOT FLAMMABILITY CLASSIFICATION: Not applicable.

EPA - SARA TITLE III SECTION 313: Not applicable - Consumer product.

TSCA:	All components of this product are listed or are exempted or excluded from listing on the U.S. Toxic Substances Control Act (TSCA) chemical substance inventory.

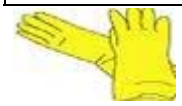
The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, The Dial Corporation makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, The Dial Corporation will not be responsible for damages of any kind resulting from the use of or reliance upon such information. No representations, or warranties, either expressed or implied of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information set forth herein or to the product to which the information refers.

MSDS CREATION DATE: 04/24/92
SUPERSEDES: 10/11/01 Rev. 17
REVISION DATE: 07/12/02
REVISION: Updated Substance Identification, Health Hazard Data and Fire & Explosion Data Sections.

MATERIAL SAFETY DATA SHEET

JohnsonDiversey
Clean is just the beginning

INSTITUTIONAL FORMULA DRANO

HMIS		NFPA	Personal protective equipment
Health	3	3	
Fire Hazard	0	0	
Reactivity	0	0	

Version Number: 2 *Preparation date: 2005-05-06*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: INSTITUTIONAL FORMULA DRANO

MSDS #: 126061002
Product code: 90485, 126061002
Recommended use: Cleaning product.

Manufacturer, importer, supplier:

Consumer Branded Professional Products, Div.
JohnsonDiversey, Inc.
8310 16th Street
Sturtevant, Wisconsin 53177-0902
Phone: (888) 352-2249

Canadian Headquarters
JohnsonDiversey - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
DANGER. CORROSIVE. CAUSES EYE AND SKIN BURNS . HARMFUL OR FATAL IF SWALLOWED. NEVER USE OR MIX WITH ACIDS, AMMONIA OR ANY OTHER CHEMICAL.

Principle routes of exposure: Skin contact. Eye contact. Inhalation. Ingestion.
Skin contact: Corrosive. May cause permanent damage.
Eye contact: Corrosive. Causes permanent eye damage, including blindness.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract.
Ingestion: Corrosive. Causes burns to mouth, throat and stomach.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient	CAS #	Weight %	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hydroxide	1310-73-2	30 - 40%	140 mg/kg (rat)	Not available	Not available

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention immediately.
Skin contact: Flush immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation: If breathing is affected, remove to fresh air. Get medical attention immediately.
Ingestion: DO NOT induce vomiting. If able to swallow, offer sips of water or milk. GET MEDICAL ATTENTION IMMEDIATELY. Never give anything by mouth to an unconscious person.
Notes to physician: Probable mucosal damage may contraindicate the use of gastric lavage .
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: The product is not flammable. Dry chemical, water spray, foam, carbon dioxide.
Specific hazards: None known.
Unusual hazards: Corrosive material (See sections 8 and 10).
Specific methods: No special methods required.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing and footwear before re-use. Do not taste or swallow. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Do not mix with any other product or chemical . FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Keep tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
General room ventilation is adequate. Respiratory protection is not required if good ventilation is maintained .

Personal Protective Equipment

Eye protection: Chemical splash goggles.
Hand protection: Chemical resistant gloves. Includes. rubber gloves. neoprene gloves.
Skin and body protection: If major exposure is possible, wear suitable protective clothing and footwear.
Respiratory protection: No special requirements under normal use conditions. In case of insufficient ventilation wear suitable respiratory equipment.
Hygiene measures: Avoid contact with skin, eyes and clothing . Handle in accordance with good industrial hygiene and safety practice .

Ingredient	CAS #	ACGIH	OSHA	Mexico
Sodium hydroxide	1310-73-2	2 mg/m^3 (Ceiling)	2 mg/m^3	2 mg/m^3 (Ceiling)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Straw
Odor: Ammoniacal
Specific gravity: 1.35
Dilution pH: No information available
Bulk density: No information available
Vapor density: No information available
Evaporation rate: No information available
Solubility in other solvents: No information available
Viscosity: No information available
Partition coefficient (n-octanol/water): No information available

Appearance: Liquid
Boiling point/range: Not determined
Melting point/range: Not determined
pH: 13.0
Density: 1.35
Decomposition temperature: Not determined
Autoignition temperature: No information available
Solubility: Soluble
VOC: 0.0

Flash point: Not applicable

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerisation does not occur
Hazardous decomposition products: None reasonably foreseeable.
Materials to avoid: Acids. Oxidising agents. Do not mix with any other product or chemical.
Conditions to avoid: Do not mix with any other product or chemical .

11. TOXICOLOGICAL INFORMATION

Acute toxicity Corrosive .
Component Information: See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: When used for its intended purpose this product should not cause adverse effects in the environment

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Undiluted product is regulated under environmental and transportation laws as a corrosive waste . Dispose of according to all federal, state and local applicable regulations .

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:	ILRTK:	CTRTK:
Water	7732-18-5	-	-	-	-	-	-
Sodium hydroxide	1310-73-2	Listed	Listed	Listed	Listed	Listed	Listed

CERCLA / SARA

Ingredient	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Sodium hydroxide	1310-73-2	30 - 40%	1000		

Canada
WHMIS hazard class: E Corrosive material .

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

WINDEX Powerized Glass Cleaner (RTU)

HMIS		NFPA	Personal protective equipment
Health	0	0	None / Aucune / Ninguno
Flammability	2	1	
Physical Hazard / Instability	0	0	

Version Number: 3

Preparation date: 2012-02-17

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: WINDEX Powerized Glass Cleaner (RTU)

MSDS #: MS0500259
Product Code: 5638732, 90122, 90135, 90139, 90940
Recommended use: Cleaning product.

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-1964
Phone: 1-888-352-2249
MSDS Internet Address: www.diversey.com
Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
The product contains no substances which at their given concentration, are considered to be hazardous to health.

Principal routes of exposure: Eye contact. Skin contact. Inhalation. Ingestion.
Eye contact: None known.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components None

4. FIRST AID MEASURES

Eye contact: Rinse with plenty of water.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.
Aggravated Medical Conditions: None known

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical, CO2, water spray or "alcohol" foam.
Specific hazards: Although this product has a flash point below 200 Deg. F, it is an aqueous solution containing an alcohol and does not sustain combustion.
Unusual hazards: None known
Specific methods: No special methods required

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: No information available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Use personal protective equipment.
Environmental precautions and clean-up methods:	Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Clean-up methods - large spillage. Use appropriate containment to avoid environmental contamination.

7. HANDLING AND STORAGE

Handling:
Handle in accordance with good industrial hygiene and safety practice. Use only in well-ventilated areas. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions.
Hand protection:	No special requirements under normal use conditions
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Liquid
Specific gravity: 0.997
Vapor density: No information available
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Solubility in other solvents: No information available
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: 10.7
Explosion limits: - upper: Not determined **- lower:** Not determined

Bulk density: No information available
Evaporation Rate No information available
Color: Clear Blue
Odor: Ammonia
Melting point/range: Not determined
Autoignition temperature: No information available
Density: 8.34 lbs/gal 1 Kg/L
Flash point: 185 °F 85.0 °C
Viscosity: No information available
VOC: 0.5 % *
Dilution pH: 10.7 @ RTU

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability:	The product is stable
Polymerization:	Hazardous polymerization does not occur
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Oral LD50 estimated to be greater than 5000 mg/kg; Dermal LD50 estimated to be > 2000 mg/kg
Component Information:	See Section 3
Chronic toxicity:	None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

Ingredient(s)	CAS #	NTP	IARC	OSHA
Isopropyl alcohol	67-63-0		3	X

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Dispose of according to all federal, state and local applicable regulations.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Please refer to the Diversey HazMat Library, http://naextranet.diversey.com/dot/, for up to date shipping information.

DOT Bill of Lading Description: CLEANING, WASHING, BUFFING, OR POLISHING COMPOUNDS LIQUID

IMDG Bill of Lading Description: Same as DOT above.

15. REGULATORY INFORMATION

International Inventories at CAS# Level
All components of this product are listed on the following inventories: U.S.A. (TSCA)

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Ammonium hydroxide	1336-21-6	X	X	X	X
Water	7732-18-5	-	-	-	-

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Ammonium hydroxide	1336-21-6	0.1 - 1.5%	1000		X

SARA 311/312 Hazard Categories

Immediate: -
Delayed: -
Fire: -
Reactivity: -
Sudden Release of Pressure: -

Canada
WHMIS hazard class: Not for sale in Canada

16. OTHER INFORMATION

Reason for revision:	Not applicable
Prepared by:	NAPRAC
Additional advice:	• Contains a fresh fragrance

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Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1226

WINDEX® ORIGINAL GLASS & SURFACE WIPES

Version 2.1

Revision Date 12/16/2010

Print Date 01/17/2011

MSDS Number 350000003614
SITE_FORM Number
30000000000000002954.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name	:	WINDEX® ORIGINAL GLASS & SURFACE WIPES
Use of the Substance/Mixture	:	Hard Surface Cleaner
Company	:	S.C. Johnson & Son, Inc. 1525 Howe Street Racine WI 53403-2236
Emergency telephone number	:	24 Hour Transport & Medical Emergency Phone (866) 231-5406 24 Hour International Emergency Phone (952) 852-4647

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor	:	white / Liquid absorbed by inert carrier material / ammoniacal
Immediate Concerns	:	No adverse effects expected when used as directed.

Potential Health Effects

Exposure routes	:	Eye, Skin, Inhalation, Ingestion.
Eyes	:	May cause: Mild eye irritation
Skin	:	Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	:	No adverse effects expected when used as directed.
Ingestion	:	May cause abdominal discomfort.
Aggravated Medical Condition	:	Persons with pre-existing skin disorders may be more susceptible to irritating effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Isopropanol	67-63-0	1.00 - 5.00

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For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact	:	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Skin contact	:	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Inhalation	:	No special requirements
Ingestion	:	Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Further information	:	Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.
Flash point	:	> 93 °C > 199.4 °F Method: Tag Closed Cup (TCC)
Lower explosion limit	:	Note: not applicable
Upper explosion limit	:	Note: not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	No special precautions required.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods for cleaning up	:	Sweep up and shovel into suitable containers for disposal. Clean residue from spill site.

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7. HANDLING AND STORAGE

Handling

Advice on safe handling : Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isopropanol	67-63-0	980 mg/m3	400 ppm	-	OSHA TWA
Isopropanol	67-63-0	-	400 ppm	-	ACGIH STEL
Isopropanol	67-63-0	-	200 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : Use only with adequate ventilation.

Hand protection : No special requirements.

Eye protection

Industrial setting : No special requirements.

Household setting : Avoid contact with eyes.

Skin and body protection : No special requirements.

Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid absorbed by inert carrier material
Color	:	white
Odor	:	ammoniacal
pH	:	8.5 - 10.5
Boiling point	:	no data available
Freezing point	:	no data available
Flash point	:	> 93 °C > 199.4 °F Method: Tag Closed Cup (TCC)
Evaporation rate	:	no data available
Autoignition temperature	:	no data available
Lower explosion limit	:	not applicable
Upper explosion limit	:	not applicable
Vapour pressure	:	similar to water
Density	:	no data available
Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	no data available
Viscosity, dynamic	:	not applicable
Volatile Organic Compounds (California Air Resource Board – CARB) Total VOC (wt. %)	:	2.4 % - does not include any applicable regulatory exemptions

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10. STABILITY AND REACTIVITY

Conditions to avoid	:	Direct sources of heat.
Materials to avoid	:	Do not mix with bleach or any other household cleaners.
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous reactions	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 estimated > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 estimated > 2.58 mg/l
Acute dermal toxicity	:	LD50 estimated > 5,000 mg/kg

Chronic effects

Carcinogenicity	:	no data available
Mutagenicity	:	no data available
Reproductive effects	:	no data available
Teratogenicity	:	no data available
Sensitisation	:	Not known to be a sensitizer.

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12. ECOLOGICAL INFORMATION

Ecotoxicity effects : no data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

RCRA waste class : Non-hazardous waste

SCJ product category : SNH: Solid Non-Hazardous

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.
Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

Sea transport

- *IMDG:*

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

Air transport

- *ICAO/IATA:*

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

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15. REGULATORY INFORMATION

Notification status	:	All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Notification status	:	All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).
California Prop. 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Canada Regulations	:	This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	1
Reactivity	0

NFPA Ratings

Health	1
Fire	1
Reactivity	0
Special	

Further information
This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

WINDEX® ORIGINAL GLASS & SURFACE WIPES

Version *2*.1

Print Date 01/17/2011

Revision Date 12/16/2010

MSDS Number 350000003614
SITE_FORM Number
30000000000000002954.001

PLEDGE® MULTISURFACE II ANTIBACTERIAL (FRESH CITRUS)

Version *1*.1 Print Date 03/04/2015

Revision Date 02/25/2015 SDS Number 350000021920

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **PLEDGE® MULTISURFACE II ANTIBACTERIAL (FRESH CITRUS)**

Recommended use : Disinfectant

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252

Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

Hazard classification	Hazard category	Hazards identification
Gases under pressure	Compressed gas	Contains gas under pressure; may explode if heated.

Labelling

Hazard symbols
Gas cylinder

Signal word
Warning

Hazard statements
Contains gas under pressure; may explode if heated.

Precautionary statements
Protect from sunlight. Store in a well-ventilated place.

Other hazards : None identified

PLEDGE® MULTISURFACE II ANTIBACTERIAL (FRESH CITRUS)

Version *1*.1 Print Date 03/04/2015

Revision Date 02/25/2015 SDS Number 350000021920

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight percent
Isopropanol	67-63-0	1.00 - 5.00
Alkyl ethylbenzalkonium	85409-23-0	0.0001 - 0.10
n-Alkyl Dimethyl Benzyl Ammonium Chloride	53516-76-0	0.0001 - 0.10

The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : No special requirements

Skin contact : No special requirements

Inhalation : No special requirements.

Ingestion : No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during firefighting : Aerosol Product - Containers may rocket or explode in heat of fire.

Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

PLEDGE® MULTISURFACE II ANTIBACTERIAL (FRESH CITRUS)

Version *1*.1 Print Date 03/04/2015

Revision Date 02/25/2015 SDS Number 350000021920

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Remove all sources of ignition.
Wash thoroughly after handling.

Environmental precautions : Outside of normal use, avoid release to the environment.

Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing.
For personal protection see section 8.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isopropanol	67-63-0	980 mg/m3	400 ppm	-	OSHA TWA
Isopropanol	67-63-0	-	400 ppm	-	ACGIH STEL
Isopropanol	67-63-0	-	200 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection	:	No special requirements.
Eye protection	:	No special requirements.
Skin and body protection	:	No special requirements.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	aerosol Compressed gas
Color	:	clear
Odor	:	pleasant
Odour Threshold	:	No data available
pH	:	8.0 - 9.0 (undiluted)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	No data available

Vapour pressure	:	No data available
Vapour density	:	No data available
Relative density	:	0.99 g/cm3 at 20 °C
Solubility(ies)	:	completely soluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	1.7 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified

10. STABILITY AND REACTIVITY

Possibility of hazardous	:	If accidental mixing occurs and toxic gas is formed, exit area

reactions immediately. Do not return until well ventilated.

Conditions to avoid : Direct sources of heat.

Incompatible materials : Do not mix with bleach or any other household cleaners.
Strong bases

Hazardous decomposition products : Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview : Warning

Acute oral toxicity : LD50
Measured
> 5,000 mg/kg

Acute inhalation toxicity : LC50
Measured
> 5.11 mg/l

Acute dermal toxicity : LD50
Measured
> 5,000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	-
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-

Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

Toxicity to fish

Components	End point	Species	Value	Exposure time
Isopropanol	LC50	Pimephales promelas (fathead minnow)	9,640 mg/l	96 h
Alkyl ethylbenzalkonium	No data available			
n-Alkyl Dimethyl Benzyl Ammonium Chloride	No data available			

Toxicity to aquatic invertebrates

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Components	End point	Species	Value	Exposure time
Isopropanol	EC50	Daphnia magna (Water flea)	13,299 mg/l	48 h
Alkyl ethylbenzalkonium	EC50 No data available	Daphnia (water flea)	0.016 mg/l	
n-Alkyl Dimethyl Benzyl Ammonium Chloride	No data available			

Toxicity to aquatic plants

Components	End point	Species	Value	Exposure time
Isopropanol	EC50	Desmodesmus subspicatus (green algae)	> 1,000 mg/l	72 h
Alkyl ethylbenzalkonium	No data available			
n-Alkyl Dimethyl Benzyl Ammonium Chloride	No data available			

Persistence and degradability

Component	Biodegradation	Exposure time	Summary
Isopropanol	53 %	5 d	Readily biodegradable
Alkyl ethylbenzalkonium	60 %	13 d	Readily biodegradable
n-Alkyl Dimethyl Benzyl Ammonium Chloride	No data available		

Bioaccumulative potential

Component	Bioconcentration factor (BCF)	Partition Coefficient n-Octanol/water (log)

Isopropanol	0.96 estimated	0.05
Alkyl ethylbenzalkonium	No data available	No data available
n-Alkyl Dimethyl Benzyl Ammonium Chloride	No data available	No data available

Mobility

Component	**End point**	**Value**
Isopropanol	No data available	
Alkyl ethylbenzalkonium	No data available	
n-Alkyl Dimethyl Benzyl Ammonium Chloride	No data available	

PBT and vPvB assessment

Component	**Results**
Isopropanol	Not fulfilling PBT and vPvB criteria
Alkyl ethylbenzalkonium	Not fulfilling PBT and vPvB criteria
n-Alkyl Dimethyl Benzyl Ammonium Chloride	Not fulfilling PBT and vPvB criteria

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

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	Land transport	Sea transport	Air transport
UN number	1950	1950	1950
UN proper shipping name	UN 1950 AEROSOLS, Non-Flammable, 2.2, LTD QTY	UN 1950 AEROSOLS, Non-Flammable, 2.2, LTD QTY	UN 1950 AEROSOLS, Non-Flammable, 2.2, LTD QTY
Transport hazard class(es)	2.2	2	2.2
Packing group	-	-	-
Environmental hazards	-	-	-
Special precautions for user	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.

15. REGULATORY INFORMATION

FIFRA Labeling

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.
Following is the hazard information as required on the pesticide label:

Contents under pressure.
Exposure to temperatures above 130° F may cause bursting.

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental

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Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

Registration # / Agency
4822-576/US/EPA

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	0
Reactivity	0

NFPA Ratings

Health	1
Fire	0
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

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Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

SAFETY DATA SHEET

Dust Mop Treatment

Section 1. Identification

GHS product identifier : Dust Mop Treatment

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation
1001 Brown Avenue
Toledo, OH 43607
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec 800-424-9300 (24 Hour)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable aerosol.
May be fatal if swallowed and enters airways.

Precautionary statements

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.

Response : IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 035

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated light	≥10 - <25	64742-47-8
Solvent naphtha (petroleum), light aliph.	≥5 - <10	64742-89-8
propane	≥1 - <3	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Section 4. First aid measures

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated light	**ACGIH TLV (United States, 4/2014).** **Absorbed through skin.** TWA: 200 mg/m³, (as total hydrocarbon vapor) 8 hours.
propane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.

Section 8. Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): disposable vinyl

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Aerosol. Compressed gas. Emulsion.]

Color : White.

Odor : Fruity.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: -104.4°C (-155.9°F) [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.889

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 4.205 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Distillates (petroleum), hydrotreated light propane	Category 3 Category 3	Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated light Solvent naphtha (petroleum), light aliph.	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Section 11. Toxicological information

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated light	Acute LC50 2200 µg/l Fresh water	Fish - Lepomis macrochirus	4 days
Solvent naphtha (petroleum), light aliph.	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Solvent naphtha (petroleum), light aliph.	-	10 to 2500	high
propane	1.09	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	1950	1950	1950	1950	1950	
UN proper shipping name	Aerosols	Aerosols	Aerosols	Aerosols	Aerosols	Not available.
Transport hazard class(es)	2.1	2.1	2.1	2	2.1	2.1

Section 14. Transport information

Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	**Reportable quantity** 18181.8 lbs / 8254.5 kg [2452.9 gal / 9285.2 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. **Limited quantity** Yes.	**Explosive Limit and Limited Quantity Index** 1	-	**Tunnel code** (D)	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :
TSCA 8(a) PAIR: heptane
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
All components are listed or exempted.
Clean Water Act (CWA) 307: toluene; benzene; ethylbenzene
Clean Water Act (CWA) 311: toluene; benzene; ethylbenzene
Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Section 15. Regulatory information

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Distillates (petroleum), hydrotreated light	≥10 - <25	No.	No.	No.	Yes.	No.
Solvent naphtha (petroleum), light aliph.	≥5 - <10	No.	No.	No.	No.	Yes.
propane	≥1 - <3	Yes.	Yes.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: BUTANE; PROPANE

New York : None of the components are listed.

New Jersey : The following components are listed: BUTANE; PROPANE

Pennsylvania : The following components are listed: BUTANE; PROPANE

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
toluene	No.	Yes.	No.	7000 µg/day (ingestion)
benzene	Yes.	Yes.	6.4 µg/day (ingestion) 13 µg/day (inhalation)	24 µg/day (ingestion) 49 µg/day (inhalation)
ethylbenzene	Yes.	No.	41 µg/day (ingestion) 54 µg/day (inhalation)	No.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

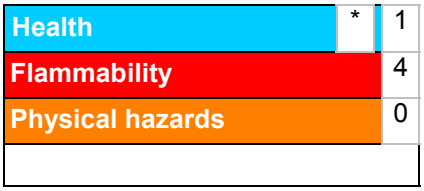
National inventory

Section 15. Regulatory information

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.
Japan	:	Not determined.
Malaysia	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Flam. Aerosol 1, H222 Asp. Tox. 1, H304	Expert judgment Expert judgment

History

Date of printing	:	4/8/2015.
Date of issue/Date of revision	:	4/8/2015.
Date of previous issue	:	4/8/2015.
Version	:	3

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

msdsreport
your source for safety
http://msdsreport.com/msds/CDRZG

EASY MARKER MARKING PAINT RED

MSDS Number

CDRZG

National Stock Number

8010-00F053020

Product Name

EASY MARKER MARKING PAINT RED

Manufacturer

FOX VALLEY SYSTEMS INC

Product Identification

Product ID:EASY MARKER MARKING PAINT RED
MSDS Date:07/07/1993
FSC:8010
NIIN:00F053020
MSDS Number: CDRZG

Responsible Party

FOX VALLEY SYSTEMS INC

640 INDUSTRIAL DR

CARY , IL 60013-1944

US

Emergency Phone: 312-639-5744

Info Phone: 312-639-5744

Cage: 1BF99

Contractor

FOX VALLEY SYSTEMS INC

CARY, IL 60013

US

847-639-5744

Cage: 1BF99

Ingredients

TOLUENE (IARC CARC- GROUP 3) *96-4*

CAS: 108-88-3

RTECS: XS5250000

Fraction By Weight: 10-20%

OSHA PEL100 PPM

ACGIH TLV: 100 PPM

EPA Report Quantity: 1000 LBS

DOT Report Quantity: 1000 LBS

LIGHT ALIPHATIC NAPHTHA, VM & P NAPHTHA, LACOLENE *96-4*

CAS: 64742-89-8

Fraction By Weight: 5-12%

OSHA PEL300 PPM

ACGIH TLV: 300 PPM

XYLENE, DIMETHYLBENZENE, XYLOL (IARC - GROUP 3) *96-4*

CAS: 1330-20-7

RTECS: ZE2100000

Fraction By Weight: 1-5%

OSHA PEL100 PPM

ACGIH TLV: 100 PPM, SKIN

EPA Report Quantity: 1000 LBS

DOT Report Quantity: 1000 LBS

ISOBUTANE, 2-METHYLPROPANE

CAS: 75-28-5

RTECS: TZ4300000

Fraction By Weight: 15-20%

OSHA PEL1800 MG/CUM

ACGIH TLV: 1000 PPM

ETHYL BENZENE *96-4*

CAS: 100-41-4

RTECS: DA0700000

Fraction By Weight: 1-2%

OSHA PEL435 MG/CUM

ACGIH TLV: 434 MG/CUM

EPA Report Quantity: 1000 LBS

DOT Report Quantity: 1000 LBS

BARIUM SULFATE, BARYTES *96-4*

CAS: 7727-43-7

RTECS: CR0600000

Fraction By Weight: 1-2%

OSHA PEL10 MG/CUM

ACGIH TLV: 10 MG/CUM

MOLYBDATE ORANGE; LEAD CHROMATE MOLYBDATE SULFATE RED

CAS: 12656-85-8

RTECS: QA4660000

Fraction By Weight: 3-8%

OSHA PEL5 MG/CUM

ACGIH TLV: 5 MG/CUM

2-BUTOXYETHANOL (ETHYLENE GLYCOL MONOBUTYL ETHER), BUTYL

CAS: 111-76-2

RTECS: KJ8575000

Fraction By Weight: 1-5%

OSHA PEL50 PPM (SKIN)

ACGIH TLV: 25 PPM (SKIN)

PROPANE (DIMETHYLMETHANE) *96-4*

CAS: 74-98-6

RTECS: TX2275000

Fraction By Weight: 10-20%

OSHA PEL1000 PPM

ACGIH TLV: SIMPLE ASPHYXIANT

PROPYLENEGLYCOL MONOMETHYL ETHER ACETATE,

CAS: 108-65-6

RTECS: AI8925000

Fraction By Weight: 1-5%

Hazards

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Health Hazards Acute and Chronic:EYES: IRRITATION & CONJUNCTIVITIS. SKIN: MODERATE IRRITATION, DERMATITIS & ABSORPTION. INHALATION: MUCOUS MEMBRANE IRRITATION OF THE NOSE & THROAT, RESPIRATORY IRRITATION & ALLERGIC REACTION. PRODUCT CONTAINS LEAD CHROMATES & LEAD MOLYBDATE. DRIED FILM OF THIS PAINT MAY BE HARMFUL/FATAL IF EATEN/CHEWED. (SEE SUPP)
Explanation of Carcinogenicity:SEE INGREDIENTS.
Effects of Overexposure:IRRITATION, REDNESS, TEARING, BLURRED VISION, DEFATTING, HEADACHES, NAUSEA, DROWSINESS.

First Aid

First Aid:EYES: FLUSH W/WATER FOR 15 MINS. SKIN: WASH AREA THOROUGHLY W/SOAP & WATER. APPLY A MOISTURIZING HAND CREAM. INHALATION: REMOVE TO FRESH AIR. GIVE OXYGEN/CPR, PREFERABLY MOUTH TO MOUTH IF NEEDED. KEEP WARM & QUIET. INGESTION: ONLY INDUCE VOMITING AT THE INSTRUCTION OF A PHYSICIAN. KEEP WARM & QUIET. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Fire Fighting

Flash Point:-20F
Lower Limits:1.9
Upper Limits:8.5
Extinguishing Media:FOAM, CO2, DRY CHEMICAL.
Fire Fighting Procedures:USE FULL PROTECTIVE EQUIPMENT USING SCBA. WATER MAY BE USED TO COOL CLOSED CONTAINERS.
Unusual Fire/Explosion Hazard:EXTREMELY FLAMMABLE. SPRAY MIST/VAPORS FROM CAN PER 400 CUBIC FEET OF AIR MAY REACH LOWER EXPLOSIVE LIMIT & COULD BE IGNITED BY A FLAME/SPARK.

Accidental Release

Spill Release Procedures:REMOVE SOURCES OF IGNITION, VENTILATE AREA, WIPE UP W/INERT MATERIAL. DON'T FLUSH INTO DRAINS. REMOVE RESIDUE W/A SUITABLE SOLVENT CLEANER IMMEDIATELY.

Handling

Handling and Storage Precautions:AVOID STORING NEAR RADIATOR, STOVE, OPEN FLAME/DIRECT SUNLIGHT. DON'T STORE AT TEMPS >120F. USE W/ADEQUATE VENTILATION.
Other Precautions:CONTENTS UNDER PRESSURE. EXPOSURE TO HIGH TEMPS MAY CAUSE BURSTING. DON'T INCINERATE/PUNCTURE CAN. DON'T SPRAY INTO FLAMES/ANY INCANDESCENT MATERIAL. DON'T SMOKE WHILE USING THIS PRODUCT/WHERE SOLVENT VAPORS ARE PRESENT.

Exposure Controls

Respiratory Protection:NOT NORMALLY NEEDED IF LOCAL EXHAUST IS SATISFACTORY. IF VENTILATION IS INADEQUATE, USE RESPIRATORY MASK APPROVED BY NIOSH/MSHA FOR PROTECTION AGAINST SPRAY/MIST.
Ventilation:REQUIREMENTS VARY W/RATE OF PRODUCT USE. SUPPLEMENT TO KEEP BELOW OSHA & ACGIH PERMISSIBLE LEVELS OF EACH INGREDIENT.
Protective Gloves:SOLVENT RESISTANT
Eye Protection:RECOMMENDED
Work Hygienic Practices:DON'T EAT, DRINK/SMOKE.
Supplemental Safety and Health
MAT CONT'D: ALLOYS, MAGNESIUM. HLTH HZRD CONT'D: CONTACT W/BROKEN SKIN/INHALATION MAY CAUSE SEVERE BODILY HARM. LEAD CHROMATE IS A CANCER HAZARD. PROLONGED/REPEATED INALATION & INGESTION, SUCH AS FROM POOR HYGIENE, HOUSEKEEPING/HANDLING PRACTICES, CAN RESULT IN LEAD POISING.

Chemical Properties

Vapor Density:>1
Evaporation Rate & Reference:SLOWER THAN ETHER
Appearance and Odor:AEROSOL DISPENSING A PAINT. COLOR DEPENDENT UPON GRADE W/CHARACTERISTIC ODOR
Percent Volatiles by Volume:70

Stability

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS, ALKALI, ALKALINE EARTH METALS, SODIUM, POTASSIUM, BARIUM, FINE POWDERS OF LIGHT METALS. (SUPP)
Stability Condition to Avoid:HEAT, SPARKS, TEMPS >120F, OPEN FLAME, DIRECT SUNLIGHT.
Hazardous Decomposition Products:THERMAL: CO, CO2.

Disposal

Waste Disposal Methods:DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS. DON'T PIERCE/BURN CAN EVEN AFTER USE.

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Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

SAFETY DATA SHEET

Easy-Off Heavy Duty Oven Cleaner Aerosol

HEALTH • HYGIENE • HOME

1. Product and company identification

Product name : Easy-Off Heavy Duty Oven Cleaner Aerosol

Distributed by : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: **http://www.rbnainfo.com**

Product use : Oven Cleaner

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : 371752PSDS v3.0

Formulation #: : 772-004 (371752 v5.0)

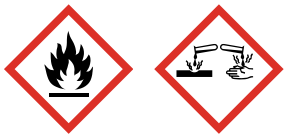
UPC Code / Sizes : 62338 00138 (16oz. Aerosol Can) 62338 87979 (14.5oz . Aerosol Can)

2. Hazards identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 2
CORROSIVE TO METALS - Category 1
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Flammable aerosol.
May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

2. Hazards identification

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Keep only in original container. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Do not breathe dust or mist. Wash hands thoroughly after handling.

Response : Absorb spillage to prevent material damage. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in corrosive resistant container with a resistant inner liner.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
sodium hydroxide	2.5 - 5	1310-73-2
2-(2-butoxyethoxy)ethanol	2.5 - 5	112-34-5
2-aminoethanol	2.5 - 5	141-43-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance

4. First aid measures

for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Move to fresh air. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes severe burns.

Ingestion : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb spillage to prevent material damage. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Absorb spillage to prevent material damage.

Conditions for safe storage, including any incompatibilities : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
sodium hydroxide	**ACGIH TLV (United States, 6/2013).** C: 2 mg/m³ **OSHA PEL 1989 (United States, 3/1989).** CEIL: 2 mg/m³ **NIOSH REL (United States, 10/2013).** CEIL: 2 mg/m³ **OSHA PEL (United States, 2/2013).** TWA: 2 mg/m³ 8 hours.
2-(2-butoxyethoxy)ethanol	**ACGIH TLV (United States, 6/2013).** TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor
2-aminoethanol	**ACGIH TLV (United States, 6/2013).** TWA: 3 ppm 8 hours. TWA: 7.5 mg/m³ 8 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m³ 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 3 ppm 8 hours. TWA: 8 mg/m³ 8 hours. STEL: 6 ppm 15 minutes.

8. Exposure controls/personal protection

	STEL: 15 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 3 ppm 10 hours. TWA: 8 mg/m³ 10 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 3 ppm 8 hours. TWA: 6 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. Physical and chemical properties

Appearance

Physical state : Liquid. [Liquefied compressed gas.]

Color : White.

Odor : Floral.

Odor threshold : Not available.

pH : 13.3 [Conc. (% w/w): 100%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.963 to 1.177

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Aerosol product

Type of aerosol : Foam

Heat of combustion : 3.816 kJ/g

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur. Polymerization. : There are no data available on the mixture itself.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : Reactive or incompatible with the following materials: metals Do not mix with household chemicals

Hazardous decomposition products : Hazardous decomposition products : carbon oxides , Various Organic chemicals.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
2-aminoethanol	LD50 Oral	Rat	1720 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
sodium hydroxide	Eyes - Severe irritant	Monkey	-	24 hours 1 Percent	-
	Eyes - Mild irritant	Rabbit	-	400 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
	Skin - Mild irritant	Human	-	24 hours 2 Percent	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
2-aminoethanol	Eyes - Severe irritant	Rabbit	-	250 Micrograms	-
	Skin - Moderate irritant	Rabbit	-	505 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes severe burns.

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

11. Toxicological information

Route	ATE value
Oral Dermal	39686.2 mg/kg 56842.1 mg/kg

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-(2-butoxyethoxy)ethanol 2-aminoethanol	Acute LC50 1300000 µg/l Fresh water Acute EC50 8.42 mg/l Fresh water Acute LC50 >100000 µg/l Marine water Acute LC50 170000 µg/l Fresh water	Fish - Lepomis macrochirus Algae - Desmodesmus subspicatus Crustaceans - Crangon crangon - Adult Fish - Carassius auratus	96 hours 72 hours 48 hours 96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-(2-butoxyethoxy)ethanol	1	-	low
2-aminoethanol	-1.31	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Release of large quantities into water may cause a pH-change resulting in danger for aquatic life.

13. Disposal considerations

Disposal methods : Waste packaging should be recycled. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
TDG Classification	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
Mexico Classification	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
IMDG Class	UN1950	Aerosols, flammable	2.1 (8)	-		**Limited quantity**
IATA-DGR Class	UN1950	AEROSOLS, flammable, containing substances in Class 8 packing group II	2.1 (8)	-		**See DG List.**

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: 2-(4-tert-butylbenzyl)propionaldehyde; 3-p-cumenyl-2-methylpropionaldehyde

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 311: sodium hydroxide

Clean Air Act (CAA) 112 regulated flammable substances: butane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

15. Regulatory information

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Reactive
Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
sodium hydroxide	2.5 - 5	No.	No.	No.	Yes.	No.
2-(2-butoxyethoxy)ethanol	2.5 - 5	Yes.	No.	No.	Yes.	No.
2-aminoethanol	2.5 - 5	Yes.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	2-(2-butoxyethoxy)ethanol	112-34-5	4.75
Supplier notification	2-(2-butoxyethoxy)ethanol	112-34-5	4.75

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: SODIUM HYDROXIDE; ETHANOLAMINE; BUTANE

New York : The following components are listed: Sodium hydroxide

New Jersey : The following components are listed: SODIUM HYDROXIDE; CAUSTIC SODA; ETHANOLAMINE; ETHANOL, 2-AMINO-; GLYCOL ETHERS; BUTANE

Pennsylvania : The following components are listed: SODIUM HYDROXIDE (NA(OH)); ETHANOL, 2-AMINO-; GLYCOL ETHERS; BUTANE

Label elements

Signal word : DANGER

Hazard statements : CORROSIVE CAUSES EYE AND SKIN BURNS. HARMFUL IF SWALLOWED. CONTENTS UNDER PRESSURE.

Precautionary measures : Keep out of the reach of children. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120 °F. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing spray. Wear suitable gloves. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	3
Flammability	1
Physical hazards	0
Personal protection	D

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue : 13/10/2014.

Date of previous issue : 29/05/2013

Version : 3

Prepared by : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

Revision comments : Update as per US GHS

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

16. Other information

RB is a member of the CSPA Product Care Product Stewardship Program.

SAFETY DATA SHEET

ENDUST (AEROSOL)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	ENDUST (AEROSOL)
Other means of identification	:	not applicable
Recommended use	:	Cleaning product
Restrictions on use	:	Reserved for industrial and professional use.
Product dilution information	:	Product is sold ready to use.
Company	:	Ecolab Inc. 370 N. Wabasha Street St. Paul, Minnesota USA 55102 1-800-352-5326
Emergency telephone	:	1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)
Issuing date	:	06/02/2014

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable aerosols	:	Category 2
Gases under pressure	:	Compressed gas
Skin sensitization	:	Category 1
Specific target organ systemic toxicity - single exposure	:	Category 3 (Central nervous system)

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : Flammable aerosol.
Contains gas under pressure; may explode if heated.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.

Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Intentional misuse by deliberate inhalation may be harmful or fatal.
Response:
IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.
Storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration (%)
white mineral oil, petroleum	8042-47-5	30 - 60
distillates (petroleum), hydrotreated light	64742-47-8	10 - 30
Aliphatic hydrocarbons	106-97-8	10 - 30
terpenes and terpenoids, sweet orange-oil	68647-72-3	5 - 10
propane	74-98-6	5 - 10

SECTION 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : Treat symptomatically.

See toxicological information (Section 11)

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Pressurized container: May burst if heated.
Flammable aerosols

Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulfur oxides
Oxides of phosphorus

Special protective equipment : Use personal protective equipment.

for fire-fighters

Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Contents under pressure. Do not puncture. Wash hands thoroughly after handling.
Conditions for safe storage	:	Keep in a cool, well-ventilated place. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Storage temperature	:	0 °C to 40 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Form of exposure	Permissible concentration	Basis
white mineral oil, petroleum	8042-47-5	TWA (Mist)	5 mg/m3	NIOSH REL
		STEL (Mist)	10 mg/m3	NIOSH REL
		TWA (Mist)	5 mg/m3	OSHA Z1
distillates (petroleum), hydrotreated light	64742-47-8	TWA	500 ppm 2,000 mg/m3	OSHA Z1
		TWA	200 mg/m3	ACGIH
Aliphatic hydrocarbons	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm	ACGIH
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m3	OSHA Z1

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations

below occupational exposure standards.

Personal protective equipment

Eye protection	:	No special protective equipment required.
Hand protection	:	Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	No special protective equipment required.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	aerosol
Color	:	white
Odor	:	Floral
pH	:	not applicable
Flash point	:	not applicable, Sustains combustion
Odor Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	< 35 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapor pressure	:	no data available
Relative vapor density	:	no data available
Relative density	:	0.84 - 0.86
Water solubility	:	soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Autoignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

Molecular weight	:	no data available
VOC	:	no data available
Heat of combustion	:	10.65 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Eye contact Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	May cause allergic skin reaction.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Inhalation may cause central nervous system effects. Intentional misuse by deliberate inhalation may be harmful or fatal.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	Redness, Irritation, Allergic reactions
Ingestion	:	No symptoms known or expected.
Inhalation	:	Dizziness, Drowsiness

Toxicity

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available

Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity		
IARC		No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA		No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP		No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT-single exposure	:	no data available
STOT-repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Ingredients

Acute oral toxicity	:	white mineral oil, petroleum LD50 rat: > 5,000 mg/kg distillates (petroleum), hydrotreated light LD50 rat: > 5,000 mg/kg

Ingredients

Acute inhalation toxicity	:	Aliphatic hydrocarbons 4 h LC50 rat: 280000 ppm

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	Toxic to aquatic life with long lasting effects.

Product

Toxicity to fish	:	no data available
Toxicity to daphnia and other aquatic invertebrates	:	no data available
Toxicity to algae	:	no data available

Ingredients

Toxicity to fish	:	white mineral oil, petroleum 96 h LC50 Fish: > 100 mg/l distillates (petroleum), hydrotreated light 96 h LC50: > 1,000 mg/l

Aliphatic hydrocarbons
96 h LC50 Fish: 22.03 mg/l

Ingredients

Toxicity to daphnia and other aquatic invertebrates : distillates (petroleum), hydrotreated light
72 h EC50: > 1,000 mg/l

Ingredients

Toxicity to algae : distillates (petroleum), hydrotreated light
48 h EC50: > 1,000 mg/l

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

UN number : 1950
Description of the goods : Aerosols
Class : 2.1
Environmentally hazardous : no

Sea transport (IMDG/IMO)

UN number : 1950
Description of the goods : AEROSOLS
Class : 2.1
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Fire Hazard Acute Health Hazard Sudden Release of Pressure Hazard
SARA 302	:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313	:	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

1907/2006 (EU) :
not determined

Switzerland. New notified substances and declared preparations :
not determined

United States TSCA Inventory :
On TSCA Inventory

Canadian Domestic Substances List (DSL) :
All components of this product are on the Canadian DSL.

Australia Inventory of Chemical Substances (AICS) :
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemical Substances :
On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and New Chemical Substances Inventory :
not determined

Japan. ISHL - Inventory of Chemical Substances (METI) :
not determined

Korea. Korean Existing Chemicals Inventory (KECI) :
On the inventory, or in compliance with the inventory

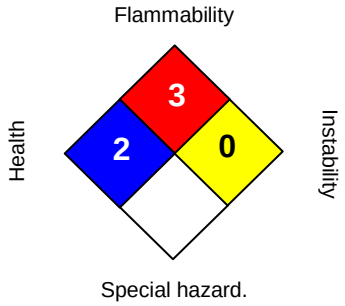
Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances in China (IECSC) :
On the inventory, or in compliance with the inventory

ENDUST (AEROSOL)

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Issuing date	:	06/02/2014
Version	:	1.0
Prepared by	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Dow AgroSciences LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
ELEMENT* 4 Herbicide

COMPANY IDENTIFICATION
Dow AgroSciences LLC
A Subsidiary of The Dow Chemical Company
9330 Zionsville Road
Indianapolis, IN 46268-1189
United States

Customer Information Number: 800-992-5994
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 352-323-3500

2. Hazards Identification

Emergency Overview
Color: Yellow
Physical State: Liquid.
Odor: Gasoline-like
Hazards of product:

DANGER! Combustible liquid and vapor. May cause allergic skin reaction. May cause eye irritation. May cause skin irritation. Harmful or fatal if swallowed; can enter lungs and cause damage. Isolate area. Toxic fumes may be released in fire situations. Highly toxic to fish and/or other aquatic organisms.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects
Eye Contact: May cause pain disproportionate to the level of irritation to eye tissues. May cause slight eye irritation. Corneal injury is unlikely.

Skin Contact: Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Repeated contact may cause severe skin irritation with local redness and discomfort.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.
Inhalation: No adverse effects are anticipated from single exposure to mist. Mist may cause irritation of upper respiratory tract (nose and throat).
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
Cancer Information: In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation.
Birth Defects/Developmental Effects: For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother.
Reproductive Effects: For similar active ingredient(s). Triclopyr. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

3. Composition Information

Component	CAS #	Amount
Triclopyr-2-butoxyethyl ester	64700-56-7	61.6 %
Kerosene (petroleum)	8008-20-6	>= 18.6 - <= 31.0 %
Balance	Not available	>= 7.4 - <= 19.8 %

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
Skin Contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be available in work area.
Eye Contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Ingestion: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Suitable extinguishing media
Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Special hazards arising from the substance or mixture
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phosgene. Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.
Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Keep away from heat, sparks and flame. Keep out of reach of children. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Do not swallow. Use with adequate ventilation. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Storage

Store in a dry place. Store in original container. Keep container tightly closed. Do not store near food, foodstuffs, drugs or potable water supplies.

Avoid temperatures below -10 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Kerosene (petroleum)	Dow IHG	TWA as total hydrocarbon vapor	10 mg/m3 SKIN
	ACGIH	TWA Non-aerosol. as total hydrocarbon vapor	200 mg/m3 P: Application restricted to conditions in which there are negligible aerosol exposures.
Triclopyr-2-butoxyethyl ester	Dow IHG	TWA	2 mg/m3 D-SEN

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

A D-SEN notation following the exposure guideline refers to the potential to produce dermal sensitization, as confirmed by human or animal data.

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields).

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical

requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Appearance	
Physical State	Liquid.
Color	Yellow
Odor	Gasoline-like
Odor Threshold	No test data available
pH	6.4 (@ 1 %) *pH Electrode*
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	No test data available.
Flash Point - Closed Cup	65.5 °C (149.9 °F) *EC Method A9 (CC)*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	No
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Vapor Pressure	No test data available
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	1.08 23 °C/4 °C *EC Method A3*
Solubility in water (by weight)	emulsifiable
Partition coefficient, n-octanol/water (log Pow)	4.09 *Measured*
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Dynamic Viscosity	16.4 mPa.s @ 20 °C
Kinematic Viscosity	11.2 cSt @ 20 °C
Explosive properties	No *EEC A14*
Oxidizing properties	No significant increase (>5C) in temperature.
Surface tension	27.0 mN/m @ 25 °C *EC Method A5*

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Thermally stable at typical use temperatures.

Possibility of hazardous reactions
Polymerization will not occur.
Conditions to Avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Acids. Bases. Oxidizers.
Hazardous decomposition products
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides. Phosgene. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity
Ingestion
As product: LD50, rat, female 1,338 mg/kg
Dermal
As product: LD50, rabbit > 2,000 mg/kg
Inhalation
As product: LC50, 4 h, Aerosol, rat > 5.2 mg/l
No deaths occurred at this concentration.
Eye damage/eye irritation
May cause pain disproportionate to the level of irritation to eye tissues. May cause slight eye irritation. Corneal injury is unlikely.
Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Repeated contact may cause severe skin irritation with local redness and discomfort.
Sensitization
Skin
Has caused allergic skin reactions when tested in guinea pigs. With the dilute mix, no allergic skin reaction is expected.
Respiratory
No relevant data found.
Repeated Dose Toxicity
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Chronic Toxicity and Carcinogenicity
Active ingredient did not cause cancer in laboratory animals. In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation.
Carcinogenicity Classifications:

Component	List	Classification
Kerosene (petroleum)	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3

Developmental Toxicity
For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.
Reproductive Toxicity
For similar active ingredient(s). Triclopyr. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. For kerosene: Limited data in laboratory animals suggest that the material does not affect reproduction.
Genetic Toxicology
Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

12. Ecological Information

Toxicity
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).

Fish Acute & Prolonged Toxicity
LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 h: 0.984 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), flow-through test, 48 h, immobilization: 0.35 mg/l
Aquatic Plant Toxicity
EbC50, Pseudokirchneriella subcapitata (green algae), biomass growth inhibition, 72 h: 10.6 mg/l
Toxicity to Above Ground Organisms
oral LD50, Colinus virginianus (Bobwhite quail): 1350 mg/kg bodyweight.
oral LD50, Apis mellifera (bees): > 100 ug/bee
contact LD50, Apis mellifera (bees): > 100 ug/bee
Toxicity to Soil Dwelling Organisms
LC50, Eisenia fetida (earthworms), 14 d: 2,552 mg/kg

Persistence and Degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Bioaccumulative potential
Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient, n-octanol/water (log Pow): 4.09 Measured
Bioconcentration Factor (BCF): 505

Mobility in soil
Mobility in soil: No relevant data found.

13. Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. Transport Information

DOT Non-Bulk
NOT REGULATED

DOT Bulk
Proper Shipping Name: COMBUSTIBLE LIQUID, N.O.S.
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, KEROSENE
Hazard Class: COMBUSTIBLE LIQUID **ID Number:** NA1993 **Packing Group:** PG III

IMDG
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, KEROSENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
EMS Number: F-A,S-F
Marine pollutant.: Yes

ICAO/IATA
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Contains Triclopyr-2-butoxyethyl Ester, KEROSENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
Cargo Packing Instruction: 964
Passenger Packing Instruction: 964
Additional Information

MARINE POLLUTANT

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Component	CAS #	Amount
Triclopyr-2-butoxyethyl ester	64700-56-7	61.6%

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Kerosene (petroleum)	8008-20-6	>= 18.6 - <= 31.0 %
Triclopyr-2-butoxyethyl ester	64700-56-7	61.6%

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Toxic Substances Control Act (TSCA)
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	2	2	1

Revision

Identification Number: 50683 / 1016 / Issue Date 04/26/2012 / Version: 14.0
DAS Code: XRM-4714
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Dow AgroSciences LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

Specimen Label

ELEMENT™ 4

For the control of woody plants and annual and perennial broadleaf weeds in non-crop industrial manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, forests and in the establishment and maintenance of wildlife openings. Use on these sites may include application to grazed areas.

Active Ingredient:	
triclopyr: 3,5,6-trichloro-2- pyridinyloxyacetic acid, butoxyethyl ester	61.6%
Other Ingredients	38.4%
Total	100.0%

Contains petroleum distillates
Acid equivalent: triclopyr - 44.3% - 4 lb/gal

EPA Reg. No. 62719-40

Keep Out of Reach of Children

CAUTION PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes Moderate Eye Irritation • Harmful If Swallowed • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals

Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

Personal Protective Equipment (PPE)

Applicators and other handlers who handle this pesticide must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are given, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the WPS (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

Note to Physician: This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This pesticide is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Physical or Chemical Hazards

Combustible. Do not use or store the product near heat or open flame.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies elsewhere on this label. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

The requirements in this box apply to forestry uses.

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear

Non-Agricultural Use Requirements

The requirements in this box apply to all use sites on this label except for forestry uses.

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: For applications to non-cropland areas, do not allow entry into areas until sprays have dried.

Storage and Disposal

Do not contaminate water, food, or feed by storage and disposal. Open dumping is prohibited.
Pesticide Storage: Store above 28°F or agitate before use.
Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Storage and Disposal (Cont.)

Nonrefillable containers 5 gallons or less:
Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers 5 gallons or larger:
Container Reuse: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Nonrefillable containers 5 gallons or larger:
Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

General Information

Use Element™ 4 specialty herbicide for the control of woody plants and annual and perennial broadleaf weeds in non-crop industrial manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, forests and in the establishment and maintenance of wildlife openings. Use on these sites may include application to grazed areas.

Element 4 is an oil soluble, emulsifiable liquid product containing the herbicide triclopyr. Element 4 may be applied to woody or herbaceous broadleaf plants as a foliar spray or as a basal bark or cut stump application to woody plants. As a foliar spray, Element 4 controls only herbaceous plants that have emerged from the soil or woody plants that are in full leaf at the time of application. Small amounts of Element 4 can kill or injure many broadleaf plants. To prevent damage to crops and other desirable plants, follow all directions and precautions.

General Use Precautions and Restrictions

In Arizona: The state of Arizona has not approved Element 4 for use on plants grown for commercial production; specifically forests grown for commercial timber production, or on designated grazing areas.

When applying this product in tank mix combination, follow all applicable use directions, precautions, and limitations on each manufacturer's label.

Chemigation: Do not apply this product through any type of irrigation system.

Apply no more than 1/2 gallon of Element 4 (2 lb ae of triclopyr) per acre per growing season on rights-of-way or any area where grazing or harvesting is allowed.

On forestry sites, Element 4 may be used at rates up to 6 quarts (6 lb ae of triclopyr) per acre per year.

Element 4 may be used at rates up to 8 quarts (8 lb ae of triclopyr) per acre per year on non-crop industrial manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides and railroads, fence rows, non-irrigation ditch banks. Portions of grazed areas that intersect treated non-cropland, rights-of-way and forestry sites may be treated at up to 8 lb ae per acre if the area to be treated on the day of application comprises no more than 10% of the total grazable area.

Do not apply Element 4 directly to, or otherwise permit it to come into direct contact with, cotton, grapes, peanuts, soybeans, tobacco, vegetable crops, flowers, citrus, or other desirable broadleaf plants. Do not permit spray mists containing Element 4 to drift onto such plants.

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs) and transitional areas between upland and lowland sites where surface water is not present except in isolated pockets due to uneven or unlevel conditions. Do not apply to open water (such as lakes, reservoirs, rivers, streams, creeks, salt water bays, or estuaries).

Do not apply on ditches currently being used to transport irrigation water. Do not apply where runoff or irrigation water may flow onto agricultural land as injury to crops may result.

Do not apply this product using mist blowers unless a drift control additive, high viscosity inverting system, or equivalent is used to control spray drift.

Sprays applied directly to Christmas trees may result in conifer injury. When treating unwanted vegetation in Christmas tree plantations, care should be taken to direct sprays away from conifers.

Element 4 is formulated as a low volatile ester. However, the combination of spray contact with impervious surfaces, such as roads and rocks, and increasing ambient air temperatures, may result in an increase in the volatility potential for this herbicide, increasing a risk for off-target injury to sensitive crops such as grapes and tomatoes.

Grazing and Haying Restrictions
Except for lactating dairy animals, there are no grazing restrictions following application of this product.

- **Grazing Lactating Dairy Animals:** Do not allow lactating dairy animals to graze treated areas until the next growing season following application of this product.
- Do not harvest hay for 14 days after application.
- Portions of grazed areas that intersect treated non-cropland, rights-of-way and forestry sites may be treated at up to 8 lb ae per acre if the area to be treated on the day of application comprises no more than 10% of the total grazable area.

Slaughter Restrictions: During the season of application, withdraw livestock from grazing treated grass at least 3 days before slaughter.

Avoiding Injurious Spray Drift
Make applications only when there is little or no hazard from spray drift. Small quantities of spray, which may not be visible, may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ornamental plants that are near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions, or temperature inversions (stable air). If the smoke layers or indicates a potential of hazardous spray drift, do not spray.

Aerial Application: Element 4 may be aerially applied by fixed wing aircraft or helicopter. For aerial application on rights-of-way or other areas near susceptible crops, apply through a Microfoil† or Thru-Valve boom†, or use an agriculturally labeled drift control additive. Other drift reducing systems or thickened sprays prepared by using high viscosity inverting systems may be used if they are made as drift-free as mixtures containing agriculturally labeled thickening agents or applications made with the Microfoil or Thru Valve boom. Do not use a thickening agent with the Microfoil or Thru Valve booms, or other systems that cannot accommodate thick sprays. Spray only when the wind velocity is low (follow state regulations). Avoid application during air inversions. If a spray thickening agent is used, follow all use recommendations and precautions on the product label.

† Reference within this label to a particular piece of equipment produced by or available from other parties is provided without consideration for use by the reader at its discretion and subject to the reader's independent circumstances, evaluation, and expertise. Such reference by Dow AgroSciences is not intended as an endorsement of such equipment, shall not constitute a warranty (express or implied) of such equipment, and is not intended to imply that other equipment is not available and equally suitable. Any discussion of methods of use of such equipment does not imply that the reader should use the equipment other than is advised in directions available from the equipment's manufacturer. The reader is responsible for exercising its own judgment and expertise, or consulting with sources other than Dow AgroSciences, in selecting and determining how to use its equipment.

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance of the outer most operating nozzles on the boom must not exceed 3/4 the length of the rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the following Aerial Drift Reduction Advisory. [This information is advisory in nature and does not supersede mandatory label requirements.]

Aerial Drift Reduction Advisory

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produced larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Ground Equipment: To aid in reducing spray drift, Element 4 should be used in thickened (high viscosity) spray mixtures using an agriculturally labeled drift control additive, high viscosity invert system, or equivalent as directed by the manufacturer. When using a spray thickening or inverting additive, follow all use directions and precautions on the product label. With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by keeping the operating spray pressures at the lower end of the manufacturer's recommended pressures for the specific nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when wind velocity is low. In hand-gun applications, select the minimum spray pressure that will provide adequate plant coverage (without forming a mist). Do not apply with nozzles that produce a fine droplet spray. Select nozzles and pressures which provide adequate plant coverage, but minimize the production of fine spray particles.

High Volume Leaf-Stem Treatment: To minimize spray drift, keep sprays no higher than brush tops and keep spray pressures low enough to provide coarse spray droplets. An agriculturally labeled thickening agent may be used to reduce drift.

Mixing Directions

Element 4 may be foliarly applied by diluting with water or by preparing an oil-water emulsion. For woody plant control, an oil-water emulsion performs more dependably under a broader range of conditions than a straight water dilution and is recommended for aerial applications.

Oil-Water Mixture Sprays
Prepare a premix of oil, surfactant and Element 4 in a separate container using diesel fuel, fuel oil, or kerosene plus an emulsifier such as Sponto 712 or Triton X-100. Use a jar test to check spray mix compatibility before preparing oil-water emulsion sprays in the mixing tank. Do not allow any water or mixtures containing water to get into the premix or Element 4 since a thick "invert" (water in oil) emulsion may form that will be difficult to break. Such an emulsion may also be formed if the premix or Element 4 is put into the mixing tank before the addition of water. Fill the spray tank about one-half full with water, then slowly add the premix with continuous agitation and complete filling the tank with water. Continue moderate agitation.

Ground Application: Add oil to the spray mix at a rate of 5 to 10% of the total mix, up to a maximum of 1 gallon of oil per acre, using agricultural spray emulsifiers according to mixing instructions below.

Aerial Application: Use oil and water in the spray mixture in a 1:5 ratio (1 part oil to 5 parts water), up to a maximum of 1 gallon of oil per acre according to mixing instructions below.

Oil Mixture Sprays for Basal Treatment
Prepare oil-based spray mixtures using either diesel fuel, No. 1 or No. 2 fuel oil, kerosene or a commercially available basal oil. Substitute other oils or diluents only as recommended by the oil or diluent's manufacturer. When preparing an oil mixture, read and follow the use directions and precautions on the manufacturer's product label. Add Element 4 to the required amount of oil in the spray tank or mixing tank and mix thoroughly. If the mixture stands over 4 hours, reagitation is required.

Oil Mixtures of Element 4 and Tordon K: Tordon K and Element 4 may be used in tank mix combination for basal bark treatment of woody plants. These herbicides are incompatible and will not form a stable mixture when mixed together directly in oil. Make a stable tank mixture for basal bark application by first combining each product with a compatibility agent prior to final mixing in the desired ratio. (See product bulletin for mixing instructions.) Tordon K is not registered for use in the states of California and Florida.

Water Dilutions
For water dilutions, an agricultural surfactant at the manufacturer's recommended rate may be added to the spray mixture to provide improved wetting of foliage. To help minimize spray drift, a drift control and deposition aid cleared for application to growing crops is recommended.

Tank Mixing
Element 4 may be applied in tank mix combination with labeled rates of other herbicides provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product. When tank mixing Element 4 with other materials, a compatibility test (jar test) using relative proportions of the tank mix ingredients should be conducted prior to mixing ingredients in the spray tank. Use a clear glass quart jar with lid and mix the tank mix ingredients in the required order and their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Mixing Order for Tank Mixes: Add one-half of the needed water to the mixing tank and start agitation. Add different materials in the order indicated below, allowing time for complete dispersion and mixing after addition of each product.

1. Water soluble herbicide (if used)
2. Premix of oil, emulsifier, Element 4 and other oil-soluble herbicide (if used); see below

Add the remaining water. During the final filling of the tank, add a drift control and deposition aid cleared for application to growing crops (if used), plus an agricultural surfactant (if a water dilution rather than an oil-water emulsion spray is used). Maintain continuous agitation of the spray mixture during mixing, final filling and throughout application to ensure spray uniformity.

Premixing: Prepare a premix of oil, emulsifier (if oil-water emulsion), and Element 4 plus other oil-soluble herbicide (if used), e.g., 2,4-D ester. **Note:** Do not allow water or mixtures containing water to get into the premix or Element 4 since a thick "invert" (water in oil) emulsion may form that will be difficult to break. Such an emulsion may also be formed if the premix or Element 4 is put into the mixing tank before the addition of water.

Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed recommended application rates. If products containing the same active ingredient are tank mixed, do not exceed the maximum allowable active ingredient use rates.
- For direct injection or other spray equipment where the product formulations will be mixed in undiluted form, special care should be taken to ensure tank mix compatibility.
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

Mixing with Liquid Fertilizer for Broadleaf Weed Control
Element 4 may be tank mixed with liquid nitrogen fertilizer and foliarly applied for weed control and fertilization of grass pastures. Use Element 4 in accordance with recommendations for grass pastures as given on this label. Apply at rates recommended by supplier or Extension Service Specialist. **Note:** Element 4 is not recommended for use with liquid fertilizer on woody plants (brush). Foliage burn caused by liquid fertilizer may reduce herbicide effectiveness on woody plants. Test for mixing compatibility using desired procedure and spray mix proportions in clear glass jar before mixing in spray tank. A compatibility aid such as Unite or Compex may be needed in some situations. **Compatibility is best with straight liquid nitrogen fertilizer solutions. Mixing with N-P-K solutions or suspensions may not be satisfactory even with the addition of compatibility aid.** Premixing Element 4 with 1 to 4 parts water may help in difficult situations.

Fill in the spray tank about half full with the liquid fertilizer, then add the herbicide with agitation and complete filling the tank with fertilizer. Apply immediately and continue agitation in the spray tank during application. **Do not store liquid fertilizer spray mixtures**. Application during very cold weather (near freezing) is not advisable. The likelihood of mixing or compatibility problems with liquid fertilizer increases under cold conditions.

Note: Do not use spray equipment for other applications to land planted, or to be planted, to susceptible crops or desirable plants **unless** it has been determined that all phytotoxic herbicide residue has been removed by thoroughly cleaning the equipment.

Plants Controlled by Element 4

Woody Plant Species

alder	choke cherry	locust	scotch broom
arrowwood	cottonwood	madrone	sumac
ash	crataegus (hawthorn)	maple (except bigleaf, vine[1])	sweetbay magnolia
aspen	dogwood	milkweed vine[3]	sweetgum
bear clover (bearmat)	Douglas-fir	mulberry	sycamore
beech	elderberry	oaks	tanoak
birch	elm (except winged elm)	osage orange	thimbleberry
blackberry	gallberry	pepper vine[3]	tree-of-heaven (*Ailanthus*)[1]
blackbrush	gorse	persimmon, eastern	trumpet creeper[3]
blackgum	granjeno	pine	tulip poplar
boxelder[1]	guajillo	poison ivy	twisted acacia
Brazilian pepper	guava[3]	poison oak	Virginia creeper[3]
buckthorn	hazel	poplar	wax myrtle (top growth)
cascara	hickory	salmonberry	wild rose
ceanothus	hornbeam	saltbush (*Braccharis* spp.)[3]	willow
cherry[3]	huisache (suppression)	salt cedar[1]	willow primrose
chinquapin	kudzu[2]	sassafras	winged elm

[1]For best control, use either a basal bark or cut stump treatment.
[2]For complete control, re-treatment may be necessary.
[3]Basal or dormant stem applications only.

Annual, Biennial and Perennial Broadleaf Weeds

Note: Numbers in parentheses refer to footnotes below table.

black medic	curly dock	matchweed	sulfur cinquefoil (2)
bull thistle	dandelion (top growth)	mustard	sweet clover
burdock	dogfennel	Oxalis	tropical soda apple (3)
Canada thistle	field bindweed	plantain	vetch
chicory	goldenrod	purple loosestrife	wild carrot (Queen Anne's lace)
cinquefoil	ground ivy	ragweed	wild lettuce
clover	lambsquarters	sericea lespedeza (1)	wild violet
creeping beggarweed	lespedeza	smartweed	yarrow

1. **Sericea lespedeza:** Apply 1 to 2 pints of Element 4 per acre. For best results, apply after maximum foliage development in the late spring to early summer, but prior to bloom.
2. **Sulfur cinquefoil:** Apply 1 to 2 pints of Element 4 per acre. For best results, apply to plants in the rosette stage.
3. **Tropical soda apple:** Apply 2 pints of Element 4 per acre when tropical soda apple plants reach the first flower stage. For best results, apply in a total spray volume of 40 gallons per acre using ground equipment. An agricultural surfactant may be added at the manufacturer's recommended rate to provide more complete wetting and coverage of the foliage. Spot treatments may be used to control sparse plant stands. For spot treatment use a 1 to 1.5% solution of Element 4 in water (1 to 1 1/2 gallons of Element 4 in 100 gallons total spray mixture) and spray the entire plant to completely wet the foliage. **In Florida**, control of tropical soda apple may be improved by using the following management practices:

- Mow plants to a height of 3 inches every 50 to 60 days or whenever they reach flowering. Continue the mowing operation through April.
- In late May to June (50 to 60 days after the April mowing), apply Element 4 as a broadcast treatment.
- Use spot treatment to control any remaining plants or thin stands of plants that germinate following a broadcast treatment.

Application Methods

Use Element 4 at rates of 1 to 8 quarts per acre to control broadleaf weeds and woody plants. It is suggested that rates higher in this rate range be used to control woody plants. In all cases, use the amount specified in enough water to give uniform and complete coverage of the plants to be controlled. The order of addition to the spray tank is water, spray thickening agent (if used), surfactant (if used), additional herbicide (if used), and Element 4. If a standard agricultural surfactant is used, use at a rate of 1 to 2 quarts per acre. Use continuous adequate agitation.

Before using any recommended tank mixtures, read the directions and all precautions on both labels.

For best results apply when woody plants and weeds are actively growing. When hard to control species such as ash, blackgum, choke cherry, elm, maples (other than vine or big leaf), oaks, pines, or winged elm are prevalent, during applications made during late summer when the plants are mature, or during drought conditions, use the higher rates of Element 4 alone or in combination with Tordon® 101 Mixture specialty herbicide or Tordon K herbicide. Tordon 101 Mixture and Tordon K are restricted use pesticides. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida.

When using Element 4 in combination with 2,4-D low volatile ester herbicide, generally the higher rates of Element 4 should be used for satisfactory brush control.

Use the higher dosage rates when brush approaches an average of 15 feet in height or when the brush covers more than 60% of the area to be treated. If lower rates are used on hard to control species, resprouting may occur the year following treatment.

On sites where easy to control brush species dominate, rates less than those listed may be effective. Consult state or local extension personnel for such information.

Foliage Treatment With Ground Equipment

Use sufficient spray volume to completely and uniformly cover foliage. For ground application, apply 10 gallons or more of total spray volume per acre. Use higher spray volumes for ground applications to ensure adequate coverage with increased depth and density of foliage, particularly for treatment of woody plants.

High Volume Foliage Treatment

For control of woody plants, use Element 4 at the rate of 2 to 6 quarts per 100 gallons of spray mixture, or Element 4 at 2 to 4 quarts may be tank mixed with labeled rates of 2,4-D low volatile ester herbicide, Tordon 101 Mixture, or Tordon K and diluted to make 100 gallons of spray. **Do not apply more than 2 gallons of Element 4 per acre.** On rangeland and permanent pasture sites, make 1 application per year and apply no more than 2 quarts of Element 4 (2 lb ae of triclopyr) per acre. Apply at a volume of 100 to 400 gallons of total spray per acre depending upon size and density of woody plants. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida. When tank mixing, follow applicable use directions and precautions on each manufacturer's label.

Depending upon the size and density of the woody plants, apply sufficient spray volume to thoroughly wet all leaves, stems, and root collars. To minimize spray drift, select the minimum spray pressure that provides adequate plant coverage without forming a mist and direct sprays no higher than the top of the target plants. Use a drift control additive cleared for application to growing crops to reduce spray drift. Before using any tank mixture, read the directions and use precautions on both labels. For best results, apply when woody plants and weeds are actively growing.

Table 1: The following table is provided as a guide to the user to achieve the proper rate of Element 4.

Total Spray Volume (gallons/acre)	Rate of Element 4	
	Forestry Sites (qt/100 gallons of spray)[1]	Non-Cropland Sites (qt/100 gallons of spray)[2]
400	1.5	2
300	2	2.7
200	3	4
100	6	8
50	12	16
40	15	20
30	20	26.7
20	30	40
10	60	80

[1] Do not exceed the maximum use rate of 6 qt of Element 4 (6 lb ae of triclopyr) per acre per year.

[2] Do not exceed the maximum use rate of 8 qt of Element 4 (8 lb ae of triclopyr) per acre per year for non-grazable areas, or 2 qt (2 lb ae of triclopyr) per acre per year for grazed areas, except on portions of grazed areas that meet the following requirement. Portions of grazed areas that intersect treated non-cropland, rights-of-way and forestry sites may be treated at up to 8 lb ae per acre if the area to be treated on the day of application comprises no more than 10% of the total grazable area.

Table 2

Application Rates per 100 Gallons of Spray		
Element 4	Plus Tank Mix Product	Rate (qt)
1 - 4 qt	--	--
1 - 2 qt	Grazon® P+D specialty herbicide	4
1 - 2 pt	2,4-D low volatile ester herbicide	1 - 2
1 - 2 qt	Tordon 22K	1 - 2
2 qt	Reclaim® specialty herbicide[1,2]	2

[1] Reclaim is registered for use only in Arizona, Texas, Oklahoma and New Mexico.

[2] See directions for Mesquite Control Using High Volume Foliage Treatment below.

Mesquite Control Using High Volume Foliage Treatment: For control of mesquite infestations of low to moderate density, apply Element 4 and Reclaim in a tank mixture to individual plants with backpack or hand-held sprayers or a vehicle-mounted sprayer with hand-held spray wand or spray gun. For individual plant treatment, use 2 quarts of Element 4 in combination with 2 quarts of Reclaim per 100 gallons of total spray solution (1/2% v/v of each product). Apply in water or as an oil-water emulsion as described in Mixing Directions. If using an oil-water emulsion, add the oil at a rate of 5% of the total spray volume. Apply as a complete spray-to-wet foliar application, including all leaves. Thorough coverage is necessary for good results, but do not spray to the point of runoff. Do not apply when mesquite foliage is wet. The total amount of Element 4 applied should not exceed 1 1/3 pints per acre. For best results, follow information given elsewhere in this label concerning effect of environmental conditions and application timing on control. This application method works best for brush less than 8 feet tall since efficient treatment and thorough coverage of taller brush is difficult to achieve with this method. To minimize drift, select a spray nozzle and pressure that provides good coverage while forming a coarse spray. Additionally, drift may be reduced by using the minimum pressure necessary to obtain plant coverage without forming a mist and by directing sprays no higher than the top of target plants. If desired, a spray dye may be added to the spray mixture to mark the treated plants.

Low Volume Foliage Treatment

To control susceptible woody plants, mix up to 20 quarts of Element 4 in 10 to 100 gallons of finished spray. The spray concentration of Element 4 and total spray volume per acre should be adjusted according to the size and density of target woody plants and kind of spray equipment used. With low volume sprays, use sufficient spray volume to obtain uniform coverage of target plants including the surfaces of all foliage, stems, and root collars (see General Use Precautions and Restrictions). For best results, a surfactant should be added to all spray mixtures. Match equipment and delivery rate of spray nozzles to height and density of woody plants. When treating tall, dense brush, a truck mounted spray gun with spray tips that deliver up to 2 gallons per minute at 40 to 60 psi may be required. Backpack or other types of specialized spray equipment with spray tips that deliver less than 1 gallon of spray per minute may be appropriate for short, low to moderate density brush.

Tank Mixing: As a low volume foliage spray, up to 12 quarts of Element 4 may be applied in tank mix combination with labeled rates of Tordon K or Tordon 101 Mixture in 10 to 100 gallons of finished spray. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida.

Broadcast Applications With Aerial or Ground Equipment

Environmental conditions and application timing influence brush and weed control results. For best results, apply when woody plants and weeds are actively growing. For woody species, apply after the rapid growth period of early spring when leaf tissue is fully expanded and terminal growth has slowed. Brush regrowth should be at least 4 ft high prior to treatment to insure adequate foliage for herbicide absorption. Adequate soil moisture before and after treatment as well as the presence of healthy foliage at the time of application are important factors contributing to optimal herbicidal activity.

Use sufficient spray volume to completely and uniformly cover foliage. For ground application, apply 10 gallons or more of total spray volume per acre. For aerial application, apply at least 2 gallons of total spray volume per acre. Use higher spray volumes for ground or aerial applications to ensure adequate coverage with increased depth and density of foliage, particularly for treatment of woody plants.

Mesquite: The herbicidal response of mesquite is strongly influenced by foliage condition, growth stage and environmental conditions. For best results, apply when new growth foliage has turned from light to dark green, when the soil temperature is above 75°F at a depth of 12 to 18 inches, and soil moisture is adequate for plant growth. Apply within 60 days after the 75°F minimum soil temperature at the 12- to 18-inch depth has been reached. Product performance may be adversely affected if application is made before mesquite foliage has turned from light to dark green or if foliage has been injured or removed by late frost, insects, hail or plant diseases. Do not treat if mesquite exhibits new (light green) terminal growth in response to recent heavy rainfall during the growing season. Rate of soil warm-up at the 12- to 18-inch depth may vary with soil texture and drainage. Coarse-textured (sandy) soils warm up sooner than fine-textured (clay) soils and dry soils warm up more quickly than wet soils. Mesquite regrowth should be at least 4 ft high prior to treatment to insure adequate foliage for herbicide absorption.

Mesquite Only

Apply 1/2 to 1 pint of Element 4 per acre in combination with 2/3 to 1 1/3 pint per acre of Reclaim. See label for Reclaim for additional treatment recommendations and information on mesquite control. Apply aerially as an oil:water emulsion in 4 gallons or more total volume per acre or with ground equipment in 10 gallons or more total volume per acre. Use a maximum of 1 gallon of oil per acre for aerial or ground application.

Mesquite and Pricklypear Cactus

If pricklypear cactus is a target species in association with mesquite, apply a tank mix of 1/2 to 1 pint of Element 4 with 1 to 2 pints of Tordon 22K per acre. (The 2 pint per acre rate of Tordon 22K provides a higher and more uniform plant kill of pricklypear.) Tordon 22K may also be applied in combination with Reclaim to control pricklypear while providing improved control of mesquite. See labels for Tordon 22K and Reclaim for additional information and treatment recommendations. Apply aerially as an oil:water emulsion in 4 gallons or more total volume per acre or with ground equipment in 10 or gallons or more total volume per acre. If mesquite canopy is dense, use higher spray volumes. Use a maximum of 1 gallon of oil per acre for aerial or ground application.

South Texas Mixed Brush (Mesquite, Pricklypear Cactus, Blackbrush, Twisted Acacia and Granjeno)

Use 1 to 2 pints of Element 4 in a tank mix with 2 pints of Tordon 22K per acre if pricklypear is a problem, or with 2/3 to 1 1/3 pints of Reclaim per acre if mesquite is the prevalent species. Element 4 contributes to the control of non-legume species such as granjeno and oaks. However, if woody legume species are predominate, apply 2 pints of Tordon 22K per acre in combination with 2/3 to 1 1/3 pints of Reclaim per acre for improved control. See labels for Tordon 22K and Reclaim for additional information and treatment recommendations. Apply aerially in an oil:water emulsion in 4 gallons or more total volume per acre or with ground equipment in 15 gallons or more total volume per acre. Use a maximum of 1 gallon of oil per acre for aerial or ground application. The use of an oil:water emulsion is critical and good spray coverage is essential for acceptable brush control.

Sand Shinnery Oak Suppression

In Texas, New Mexico and Oklahoma, apply Element 4 alone at a rate of 1/2 to 2 pints per acre for suppression of shinnery oak growing on sandy soils. Grass response following suppression may be impressive where rainfall is adequate. Grazing deferment following application together with proper grazing management is recommended to allow for the reestablishment of grass stands.

Post Oak and Blackjack Oak - Regrowth Stands

Apply in the late spring (May) to early summer (June-July) when oak leaves are fully developed (expanded). Use 2 quarts of Element 4 alone or in tank mix combination with 0.5 to 1 pints of 2,4-D low-volatile ester herbicide per acre. Apply in an oil:water emulsion or water surfactant dilution in sufficient total volume per acre to assure thorough coverage, usually 5 gallons or more per acre by fixed-wing aircraft or helicopter or 15 to 25 gallons per acre by ground equipment. Use a maximum of 1 gallon of oil per acre for aerial or ground application. Lower rates may be used for suppression only. Control will require at least 3 consecutive treatments. **Note:** Regrowth plants have a large root mass relative to top growth when compared to undisturbed plants. In order for top growth to intercept and translocate enough herbicide to control the roots, delay broadcast treatment until top growth is at least 4 ft tall.

High Volume Foliage Treatment: For regrowth less than 4 ft tall, apply 2 quarts of Element 4 per 100 gallons of water and 2 quarts of ag surfactant alone or in tank mix combination with 1 gallon of Grazon P+D or 1 quart of Tordon 22K. Apply as a high volume leaf-stem treatment to individual plants using ground equipment.

Post Oak and Blackjack Oak - Mature Stands

For control of mature stands (greater than 5 ft tall), apply 2 quarts of Element 4 per acre in late spring (May) to early summer (June-July) when oak leaves are fully developed (expanded). Understory species such as winged elm, buckbrush, tree huckleberry and ash occurring in some areas will not be controlled (only suppressed or defoliated) by using Element 4 alone. Where these understory species occur, control may be improved by tank mixing 2 quarts of Element 4 with 1 quart of Tordon 22K or 4 quarts of Grazon P+D per acre. For best results, apply as an oil:water emulsion in a total volume of 5 gallons per acre or more by fixed-wing aircraft or helicopter.

Other Susceptible Woody Plants

Apply 2 to 4 pints of Element 4 alone or in combination with 2 to 3 quarts of 3.8 lb/gal 2,4-D low volatile ester or amine formulation per acre. If difficult to control species such as ash, choke cherry, elm, maple or oaks are prevalent, and during applications made when plants are mature late in the summer or during drought conditions, use the higher rates of Element 4, alone or with 2,4-D. Element 4 may also be applied in a tank mixture with Grazon P+D or Tordon 22K for increased control of certain species. See labels for Grazon P+D and Tordon 22K for additional information and treatment recommendations. Apply aerially in 4 gallons or more total volume per acre or with ground equipment in 10 gallons or more total volume per acre. For best results on blackberry, apply during or after bloom. For management of kudzu, apply 1 quart of Element 4 per acre. Repeat application may be necessary to achieve desired level of control

Susceptible Broadleaf Weeds

Use 2 pints of Element 4 per acre in a water spray. Apply as a broadcast spray in a total volume of 10 gallons or more per acre by ground equipment or aerially in a total volume of 2 gallons or more per acre. Apply anytime the weeds are actively growing. Element 4 at 1/2 to 3 pints may be tank mixed with 1 to 2 quarts of 3.8 lb/gal 2,4-D amine or low volatile ester.

Woody Plant Control

Foliage Treatment: Use 4 to 8 quarts of Element 4 in enough water to make 5 gallons or more per acre of total spray, or 1 1/2 to 3 quarts of Element 4 may be combined with labeled rates of 2,4-D low volatile ester, Tordon 101 Mixture, or Tordon K in sufficient water to make 5 gallons or more per acre of total spray. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida.

Broadleaf Weed Control

Use Element 4 at rates of 1 to 4 quarts in a total volume of 5 gallons or more per acre as a water spray mixture. Apply anytime weeds are actively growing. Element 4 at 0.25 to 3 quarts may be tank mixed with labeled rates of 2,4-D amine or low volatile ester, Tordon K, or Tordon 101 Mixture to improve the spectrum of activity. For thickened (high viscosity) spray mixtures, Element 4 can be mixed with diesel oil or other inverting agent. When using an inverting agent, read and follow the use directions and precautions on the product label. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida.

Foliage Treatment (Utility and Pipeline Rights-of-Way)

Use 4 to 8 quarts of Element 4 alone, or 3 to 4 quarts of Element 4 in a tank mix combination with labeled rates of 2,4-D low volatile ester, Tordon 101 Mixture or Tordon K and apply in a total spray volume of 10 to 30 gallons per acre. Use the higher rates and volumes when plants are dense or under drought conditions. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida.

Portions of grazed areas that intersect treated non-cropland, rights-of-way and forestry sites may be treated at up to 8 lb ae per acre if the area to be treated on the day of application comprises no more than 10% of the total grazable area.

Basal Bark, Dormant Stem and Cut Surface Treatments

Individual plant treatments such as basal bark and cut surface applications may be used on any use site listed on this label at a maximum use rate of 8 lb ae of triclopyr per acre. These types of applications are made directly to ungrazed parts of plants and, therefore, are not restricted by the grazing maximum rate of 2 lb ae of triclopyr per acre.

Basal Bark Treatment

To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 1 to 5 gallons of Element 4 in enough oil to make 100 gallons of spray mixture. Apply with knapsack sprayer or power spraying equipment using low pressure (20 to 40 psi). Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground, thoroughly wetting the indicated area. Spray until runoff at the ground line is noticeable. Old or rough bark requires more spray than smooth young bark. Apply anytime, including the winter months, except when snow or water prevent spraying to the ground line. **Mixing with oil requires vigorous agitation to form an oil solution.** Once a solution is formed it will stay stable.

Low Volume Basal Bark Treatment

To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of Element 4 in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground in a manner that thoroughly wets the lower stems, including the root collar area, but not to the point of runoff. Herbicide concentration should vary with size and susceptibility of species treated. Apply anytime, including the winter months, except when snow or water prevent spraying to the ground line or when stem surfaces are saturated with water. See Table 1 for relationship between mixing rate, spray volume and maximum application rate. **Note:** The addition of a soil active herbicide to a basal bark mixture with Element 4 may result in damage to surrounding non-target vegetation. Care should be taken to assess the areas in which these soil active herbicides are used in combination with Element 4 in basal bark applications. **Mixing with oil requires vigorous agitation to form an oil solution.** Once a solution is formed it will stay stable.

Element 4 Plus Tordon K in Oil Tank Mix: Element 4 and Tordon K may be used in tank mix combination as a low volume basal bark treatment to improve control of certain woody species such as ash, elm, maple, poplar, aspen, hackberry, oak, oceanspray, birch, hickory, pine, tanoak, cherry, locust, sassafras, and multiflora rose. (See product bulletin for mixing instructions.) Tordon K is not registered for use in the states of California and Florida.

Streamline Basal Bark Treatment (Southern States)

To control or suppress susceptible woody plants for conifer release, mix 20 to 30 gallons of Element 4 in enough oil to make 100 gallons of spray mixture. Streamline basal bark treatments are most effective on stems less than 4 inches in basal diameter. Apply with a backpack or knapsack sprayer using equipment that provides a directed straight stream spray. Apply the spray in a 2- to 3-inch wide band to one side of stems less than 3 inches in basal diameter. When the optimum amount of spray mixture is applied, the treated zone should widen to encircle the stem within approximately 30 minutes. Treat both sides of stems which are 3 to 4 inches in basal diameter. Direct the spray at bark that is approximately 12 to 24 inches above ground. Pines (loblolly, slash, shortleaf, and Virginia) up to 2 inches in diameter breast height (dbh) can be controlled by directing the spray at a point approximately 4 feet above ground. Vary spray mixture concentration with size and susceptibility of the species being treated. Better control is achieved when spray is applied to thin juvenile bark and above rough thickened mature bark. This technique is not recommended for scrub and live oak species, including blackjack, turkey, post, live, bluejack and laurel oaks, or bigleaf maple.

Apply anytime, including winter months, except when snow or water prevents spraying at the desired height above ground level. **Note:** Best results with some hardwood species occur when applications are made from approximately 6 weeks prior to leaf expansion in the spring until approximately 2 months after leaf expansion is completed. **Mixing with oil requires vigorous agitation to form an oil solution.** Once a solution is formed it will stay stable.

Low Volume Stem Bark Band Treatment (North Central and Lake States)

To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of Element 4 in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Apply the spray in a 6- to 10-inch wide band that completely encircles the stem. Spray in a manner that completely wets the bark, but not to the point of runoff. The treatment band may be positioned at any height up to the first major branch. For best results, apply the band as low as possible. Spray mixture concentration should vary with size and susceptibility of species to be treated. Applications may be made anytime, including winter months. **Mixing with oil requires vigorous agitation to form an oil solution.** Once a solution is formed it will stay stable.

Thinline Basal Bark Treatment

To control susceptible woody plants with stems less than 6 inches in diameter, apply Element 4, either undiluted or mixed at 50 to 75% v/v with oil, in a thin stream to all sides of the lower stems. The stream should be directed horizontally to apply a narrow band of Element 4 around each stem or clump. Use a minimum of 2 to 15 milliliters of Element 4 or oil mixture with Element 4 to treat single stems and from 25 to 100 milliliters to treat clumps of stems. Use an applicator metered or calibrated to deliver the small amounts required. **Mixing with oil requires vigorous agitation to form an oil solution.** Once a solution is formed it will stay stable.

Dormant Stem Treatment

Dormant stem treatments control susceptible woody plants and vines with stems less than 2 inches in diameter. Plants with stems greater than 2 inches in diameter may not be controlled and resprouting may occur. This treatment method is best suited for sites with dense, small diameter brush. Dormant stem treatments of Element 4 can also be used as a chemical side-trim for controlling lateral branches of larger trees that encroach onto roadside, utility, or other rights-of-way.

Mix 4 to 8 quarts of Element 4 in 2 to 3 gallons of crop oil concentrate or other recommended oil and add this mixture in enough water to make 100 gallons of spray solution. Use continuous adequate agitation. Apply with knapsack or power spraying equipment, using low pressure (20 to 40 psi). In western states, apply anytime after woody plants are dormant and most of the foliage has dropped. In other areas apply anytime within 10 weeks of budbreak, generally February through April. Thoroughly wet the upper parts of the stems and use the remainder to wet the lower 12 to 15 inches above the ground to the point of runoff. For root suckering species such as sumac, sassafras and locust, also spray the ground under the plant to cover small root suckers which may not be visible above the solid surface. For oil-water mixture application, mix 6 quarts of Element 4, 25 gallons of oil and 1.5 gallons of an approved agricultural spray emulsifier such as Sponto 712 or Triton X-100 as indicated in the mixing directions. Treat as above. Element 4 may be mixed with 4 quarts of Weedone 170 herbicide to improve the control of black cherry and broaden the spectrum of herbicidal activity. Do not apply to wet or saturated bark as poor control may result.

Cut Stump Treatment

To control resprouting, mix 20 to 30 gallons of Element 4 in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressures and a solid cone or flat fan nozzle. Spray the root collar area, sides of the stump, and the outer portion of the cut surface, including the cambium, until thoroughly wet, but not to the point of runoff. Spray mixture concentration should vary with the size and susceptibility of species treated. Apply anytime, including in winter months, except when snow or water prevent spraying to the ground line. **Mixing with oil requires vigorous agitation to form an oil solution.** Once a solution is formed it will stay stable.

Cut Stump Treatment in Western States

To control resprouting of salt cedar and other *Tamarix* species, bigleaf maple, tanoak, Oregon myrtle, and other susceptible species, apply undiluted Element 4 to wet the cambium and adjacent wood around the entire circumference of the cut stump. Treatments may be applied throughout the year; however, control may be reduced with treatment during periods of moisture stress as in late summer. Cut stumps so that they are approximately level to facilitate uniform coverage of Element 4. Use an applicator which can be calibrated to deliver the small amounts of material required.

Growing Point and Leaf Base (Crown) Treatment of Yucca

Prepare a 2% v/v solution of Element 4 in diesel or fuel oil (13 fl oz of Element 4 in 5 gallons of spray mixture). Thoroughly wet the center of the plant including growing point and leaf bases to the soil surface. Complete coverage of leaves is not necessary.

Forest Management Applications

For broadcast applications, apply 1 to 6 quarts of Element 4 per acre in a total spray volume of 5 to 25 gallons per acre by air or 10 to 100 gallons per acre by ground. Use spray volumes sufficient to provide thorough coverage of treated foliage. Nozzles or additives that produce larger droplets of spray may require higher spray volumes to provide adequate coverage.

Plant Back Interval for Conifers: Conifers planted sooner than 1 month after treatment with Element 4 at less than 4 quarts per acre or sooner than 2 months after treatment at 4 to 6 quarts per acre may be injured. When tank mixtures of herbicides are used for forest site preparation, labels for all products in the mixture should be consulted and the longest recommended waiting period before planting observed.

Forest Site Preparation (Not for Conifer Release)

Southern States including Alabama, Arkansas, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia: To control susceptible woody plants and broadleaf weeds, apply Element 4 at a rate of 4 to 6 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 2 to 4 quarts of Element 4 per acre in tank mix combination with labeled rates of Tordon 101 Mixture or Tordon K. Tordon 101 Mixture and Tordon K are not registered for use in the state of Florida. Where grass control is also desired, Element 4, alone or in tank mix combination with Tordon K or Tordon 101 Mixture, may be applied with labeled rates of other herbicides registered for grass control in forests. Use of tank mix products must be in accordance with the most restrictive of label limitations and precautions. Do not exceed labeled application rates. Element 4 cannot be tank mixed with any product containing a label prohibition against such mixing.

Western, Northeastern, North Central, and Lake States (States not Listed Above as Southern States): To control susceptible woody plants and broadleaf weeds, apply Element 4 at a rate of 3 to 6 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 1.5 to 3 quarts of Element 4 per acre in tank mix combination with labeled rates of Tordon 101 Mixture, Tordon K, or 2,4-D low volatile ester. Tordon 101 Mixture and Tordon K are not registered for use in the state of California. Where grass control is also desired, Element 4, alone or in tank mix combination with Tordon 101 Mixture or Tordon K, may be applied with labeled rates of other herbicides registered for grass control in forests. When applying tank mixes, follow applicable use directions and precautions on each product label.

Southern Coastal Flatwoods: To control susceptible broadleaf weeds and woody species such as gallberry and wax-myrtle, and for partial control of saw-palmetto, apply 2 to 4 quarts of Element 4 per acre. To broaden the spectrum of species controlled to include fetterbush, staggerbush, titi, and grasses, apply 2 to 3 quarts of Element 4 per acre in tank mix combination with labeled rates of Arsenal Applicator's Concentrate herbicide. Where control of gallberry, wax-myrtle, broadleaf weeds, and grasses is desired, apply 2 to 3 quarts of Element 4 per acre in tank mix combination with labeled rates of Accord Concentrate or Accord SP herbicide.

These treatments may be broadcast during site preparation of flat planted or bedded sites or, on bedded sites, applied in bands over the top of beds. For best results, apply in late summer or fall. Efficacy may not be satisfactory when applications are made in early season prior to August. **Note:** Do not apply after planting pines.

Directed Spray Applications for Conifer Release

To release conifers from competing hardwoods and brush such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, hickory, alder, birch, aspen, pin cherry, *Ceanothus* spp., blackberry, chinquapin, and poison oak, mix 4 to 20 quarts of Element 4 in enough water to make 100 gallons of spray mixture. This spray mixture should be directed onto foliage of competitive hardwoods using knapsack or backpack sprayers with flat fan nozzles or equivalent anytime after the hardwoods and brush have reached full leaf size, but before autumn coloration. The majority of treated hardwoods and brush should be less than 6 feet in height to ensure adequate spray coverage. Care should be taken to direct spray away from contact with conifer foliage, particularly foliage of desirable pines. See Table 1 for relationship between mixing rate, spray volume and maximum application rate.

Note: Spray may cause temporary damage and growth suppression where contact with conifers occurs; however, injured conifers should recover and grow normally. Over-the-top spray applications can kill pines.

Broadcast Applications for Mid-Rotation Understory Brush Control in Southern Coastal Flatwoods Pine Stands (Ground Equipment Only)

For control of susceptible species such as gallberry and wax-myrtle and broadleaf weeds, apply 2 to 4 quarts of Element 4 per acre. To broaden the spectrum of woody plants controlled to include fetterbush, staggerbush, and titi, apply 2 to 3 quarts of Element 4 per acre in tank mix combination with labeled rates of Arsenal Applicator's Concentrate.

Saw-palmetto will be partially controlled by use of Element 4 at 4 quarts per acre or by mixtures of Element 4 at 2 to 3 quarts per acre in tank mix combination with either Arsenal Applicator's Concentrate or Escort herbicide. These mixtures should be broadcast applied over target understory brush species, **but to prevent injury to pines, make applications underneath the foliage of pines.** Apply sprays in 30 gallons or more per acre of total volume. For best results, apply in late summer or fall. Efficacy may not be satisfactory when applications are made in early season prior to August.

Broadcast Applications for Conifer Release in the Pacific Northwest and California

Dormant Conifers Before Bud Swell (Excluding Pines): To control or suppress deciduous hardwoods such as vine maple, bigleaf maple, alder, scotch broom, or willow **before leaf-out**, or evergreen hardwoods such as madrone, chinquapin, and *Ceanothus* spp., use Element 4 at 1 to 2 quarts per acre. Use diesel or fuel oil as a diluent, or use water plus 1 to 2 gallons per acre of diesel oil or a suitable surfactant or oil substitute at manufacturer's recommended rates. **Mixing with oil as the only diluent requires vigorous agitation to form an oil solution.** Once a solution is formed it will stay stable.

Conifer Plantations (Excluding Pines) After Hardwoods Begin Growth and Before Conifer Bud Break ("Early Foliar" Hardwood Stage): Use Element 4 at 1 to 1.5 quarts alone or with 2,4-D low volatile ester herbicide in water carrier to provide no more than 3 lb ae per acre from both products. After conifer bud break, these sprays may cause more serious injury to the crop trees. Use of a surfactant may cause unacceptable injury to conifers especially after bud break.

Conifer Plantations (Excluding Pines) After Conifers Harden Off in Late Summer and While Hardwoods are Still Actively Growing: Use Element 4 at rates of 1 to 1.5 quarts per acre alone or with 2,4-D low volatile ester to provide no more than 3 lb ae per acre from both products. Treat as soon after conifer bud hardening as possible so that hardwoods and brush are actively growing. Use of oil, oil substitute, or surfactant may cause unacceptable injury to the conifers.

Broadcast Applications for Conifer Release in the Eastern United States

To release spruce, fir, red pine, and white pine from competing hardwoods such as red maple, sugar maple, striped maple, alder, birch (white, yellow, and grey), aspen, ash, pin cherry, and *Rubus* spp. and perennial and annual broadleaf weeds, use Element 4 at rates of 1.5 to 3 quarts per acre alone or with 2,4-D amine or low volatile ester to provide no more than 4 lb ae per acre from both products. Apply in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

Broadcast Applications for Conifer Release in the Lake States Region

To release spruce, fir, and red pine from competing hardwoods such as aspen, birch, maple, cherry, willow, oak, hazel, and *Rubus* spp. and perennial and annual broadleaf weeds, use Element 4 at rates of 1.5 to 3 quarts per acre. Apply in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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Label Code: D02-339-002
Replaces Label: D02-339-001
LOES Number: 010-02140

EPA accepted 04/18/07

PREPARED FOR: NORAZZA

========== SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION ==========

PRODUCT NAME: ENDUST FOR ELECTRONICS 096000 Multi-Surface Cleaning Spray
PRODUCT CODE: 096000

MANUFACTURER'S NAME: Norazza, Inc
ADDRESS : 3938 Broadway
Buffalo, NY 14227
Non-Emergency phone number 716-706-1160

24 HOUR EMERGENCY TELEPHONE NUMBERS:
In United States, Canada, Puerto Rico, and the U.S. Virgin Islands use ChemTel's toll free phone number: **1 (800) 255 - 3924**. Outside North America use **+ 01 or +001-813-248-0585** (Please call collect if necessary) Check local country codes at http://www.countrycodes.com/areacodes/call_unitedstates.htm

Contract# MIS0006632

========== SECTION 2 - HAZARDS IDENTIFICATION ==========

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
RESPIRATORY IRRITATION, HEADACHE, NAUSEA, FATIGUE, DROWSINESS, IMPAIRED CO-ORDINATION.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SKIN: CONTACT MAY DRY THE SKIN; PROLONGED CONTACT MAY CAUSE IRRITATION. EYES: LIQUID OR VAPOR CAN IRRITATE.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
CAN BE ABSORBED. SOLVENT ACTION CAN DRY AND DEFAT THE SKIN CAUSING THE SKIN TO CRACK, LEADING TO DERMATITIS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
NOT A LIKELY ROUTE OF EXPOSURE. IF SWALLOWED, DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ADVICE AND/OR ATTENTION.

HEALTH HAZARDS (ACUTE AND CHRONIC)
ACUTE: EYE IRRITANT. SKIN IRRITANT. CHRONIC: UNKNOWN.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
NONE KNOWN.

========== SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS ==========

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP		WEIGHT PERCENT
BUTANE	106-97-8	1640	68	2
OSHA PEL: 800 PPM, ACGIH TLV: 800 PPM				
PROPANE	74-98-6	6350	68	0
OSHA PEL: 1000 PPM, ACGIH TLV: ASPHYXIANT				

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

========== SECTION 4 - FIRST AID MEASURES ==========

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: REMOVE TO FRESH AIR. ADMINISTER OXYGEN IF NEEDED. APPLY ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. GET MEDICAL ATTENTION. SKIN: WIPE OFF WITH TOWEL. WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. EYES: WASH IMMEDIATELY WITH LARGE VOLUMES OF FRESH WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: -76 deg F METHOD USED: TOC
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.9 UPPER: 8.4

EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES
WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CONTAINERS TO PREVENT PRESSURE BUILD-UP AND EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES PREFERRED. WEAR GOGGLES AND SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS
CLOSED CONTAINERS MAY EXPLODE FROM INTERNAL PRESSURE BUILD-UP WHEN EXPOSED TO EXTREME HEAT AND DISCHARGE CONTENTS. LIQUID CONTENT OF CONTAINER WILL NOT SUPPORT COMBUSTION. OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE READILY APPARENT. OBTAIN MEDICAL ATTENTION.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
AVOID BREATHING VAPORS. VENTILATE AREA. REMOVE ALL SOURCES OF IGNITION. CLEAN UP AREA WITH ABSORBENT MATERIAL AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
STORE AND USE IN COOL, DRY, WELL-VENTILATED AREAS. DO NOT STORE ABOVE 120 DEG F. DO NOT PUNCTURE OR INCINERATE (BURN) CANS. DO NOT STICK PIN, NAIL OR ANY OTHER SHARP OBJECT INTO OPENING ON TOP OF CAN. DO NOT SPRAY IN EYES. DO NOT TAKE INTERNALLY. SEE PRODUCT LABEL FOR ADDITIONAL INFORMATION.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

PRECAUTIONS
THE STORAGE OF NON-FLAMMABLE PRODUCTS WITH NON-FLAMMABLE OR FLAMMABLE PRESSURIZING AGENT, IN CARTONS, IS THE SAME AS FOR ORDINARY CANNED GOODS IN CARTONS.

RESPIRATORY PROTECTION
NONE UNDER NORMAL USE. AVOID BREATHING VAPORS. IN RESTRICTED AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICLES AND VAPOR. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATOR OR HOOD. SELF-CONTAINED BREATHING APPARATUS IS REQUIRED FOR VAPOR CONCENTRATIONS ABOVE PEL/TLV LIMITS.

VENTILATION
SUFFICIENT TO PREVENT INHALATION OF SOLVENT VAPORS. GENERAL DILUTION AND/OR LOCAL EXHAUST VENTILATION IN VOLUME OR PATTERN TO KEEP PEL/TLV OF MOST HAZARDOUS INGREDIENT BELOW ACCEPTABLE LIMIT AND LEL BELOW STATED LIMIT.

PROTECTIVE GLOVES
NONE UNDER NORMAL USE. SOLVENT RESISTANT REQUIRED FOR PROLONGED OR REPEATED CONTACT.

EYE PROTECTION
NONE UNDER NORMAL USE; HOWEVER, USE OF SAFETY GLASSES WITH SPLASH GUARDS OR FULL

FACE SHIELD IS RECOMMENDED.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT
NONE UNDER NORMAL USE; HOWEVER, USE OF SOLVENT RESISTANT APRONS OR OTHER CLOTHING IS RECOMMENDED.

WORK/HYGIENIC PRACTICES
EYE WASHES AND SAFETY SHOWERS IN THE WORKPLACE ARE RECOMMENDED.

========== SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ==========

BOILING RANGE: 31 deg F - 212 deg F SPECIFIC GRAVITY (H2O=1): 0.99
VAPOR DENSITY: UNKNOWN EVAPORATION RATE: UNKNOWN
SOLUBILITY IN WATER: COMPLETE
APPEARANCE AND ODOR: AEROSOL PRODUCT

========== SECTION 10 - STABILITY AND REACTIVITY ==========

STABILITY: STABLE
CONDITIONS TO AVOID
APPLICATION TO HOT SURFACES. STORAGE ABOVE 120 DEG F. EXPOSURE TO OPEN FLAME.

INCOMPATIBILITY (MATERIALS TO AVOID)
OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
MAY PRODUCE FUMES WHEN HEATED TO DECOMPOSITION. FUMES MAY CONTAIN CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

========== SECTION 11 - TOXICOLOGICAL INFORMATION ==========

LONG-TERM TOXICOLOGICAL STUDIES HAVE NOT BEEN CONDUCTED FOR THIS PRODUCT.

========== SECTION 12 - ECOLOGICAL INFORMATION ==========

LONG-TERM ECOLOGICAL STUDIES HAVE NOT BEEN CONDUCTED FOR THIS PRODUCT.

========== SECTION 13 - DISPOSAL CONSIDERATIONS ==========

WASTE DISPOSAL METHOD
DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. BEFORE ATTEMPTING CLEAN UP, REFER TO OTHER SECTIONS OF THIS MSDS FOR HAZARD CAUTION INFORMATION.

========== SECTION 14 - TRANSPORT INFORMATION ==========

BY LAND: DOT PROPER SHIPPING NAME: CONSUMER COMMODITY, ORM-D
BY WATER: DOT PROPER SHIPPING NAME: UN 1950, Aerosols, 2.1, LTD QTY
BY AIR: DOT PROPER SHIPPING NAME: UN1950, Aerosols, flammable, 2.1, LTD QTY
(Packing instruction Y203 applies)

========== SECTION 15 - REGULATORY INFORMATION ==========

ALL INGREDIENTS ARE EITHER LISTED ON THE TSCA INVENTORY OR ARE EXEMPT.

========== SECTION 16 - OTHER INFORMATION ==========

DATE PRINTED: 04/20/11 NAME OF PREPARER: ESP

HMIS CODES: H-1 F-2 R-0 P-

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER,

NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. BECAUSE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL, WE ASSUME NO RESPONSIBILITY FOR ITS USE.

PRODUCT SAFETY DATA SHEET

PRODUCT NAME: Eveready / Energizer Battery

TRADE NAMES: ENERGIZER, ENERGIZER e², INDUSTRIAL , EVEREADY

CHEMICAL SYSTEM: Alkaline Manganese Dioxide-Zinc **Designed for Recharge:** No **Document Number:** 12000-A

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BATTERY MANUFACTURING, INC. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

SECTION 1 - MANUFACTURER INFORMATION

Energizer Battery Manufacturing, Inc.
25225 Detroit Rd.
Westlake, OH 44145

Telephone Number for Information:
800-383-7323 (USA / CANADA)

Date Prepared: January 2017

SECTION 2 – HAZARDS IDENTIFICATION

GHS classification: N/A

Signal Word: N/A

Hazard Classification: N/A

Under normal conditions of use, the battery is hermetically sealed.

Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.
Inhalation: Contents of an open battery can cause respiratory irritation.
Skin Contact: Contents of an open battery can cause skin irritation and/or chemical burns.
Eye Contact: Contents of an open battery can cause severe irritation and chemical burns.

SECTION 3 - INGREDIENTS

IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	% / wt.
Graphite (CAS# 7782-42-5)	15 mg/m^3 TWA (total dust) 5 mg/m^3 TWA (respirable fraction)	2 mg/m^3 TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m^3 Ceiling (as Mn)	0.2 mg/m^3 TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m^3 Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m^3 TWA PNOR* (total dust) 5 mg/m^3 TWA PNOR* (respirable fraction)	10 mg/m^3 TWA PNOC** (inhalable particulate) 3 mg/m^3 TWA PNOC** (respirable particulate)	12-25

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Non-Hazardous Components Steel (iron CAS# 65997-19-5 Water, Paper, Plastic and Other	None established None established	None established None established	18-22 Balance

* PNOR: Particulates not otherwise regulated
**PNOC: Particulates not otherwise classified

SECTION 4 – FIRST AID MEASURES

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect day or night.
Inhalation: Provide fresh air and seek medical attention.
Skin Contact: Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.
Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.
Fire fighters should wear self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

To cleanup leaking batteries:

Ventilation Requirements: Room ventilation may be required in areas where there are open or leaking batteries.

Eye Protection: Wear safety glasses with side shields if handling an open or leaking battery.
Gloves: Use neoprene or natural rubber gloves if handling an open or leaking battery.
Battery materials should be collected in a leak-proof container.

SECTION 7 - HANDLING AND STORAGE

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Battery Manufacturing, Inc. representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, consult your Energizer Battery Manufacturing, Inc. representative for proper precautions to prevent seal damage or short circuit.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Labeling: If the Eveready / Energizer Battery label or package warnings are not visible, it is important to provide a package and/or device label stating:

> **WARNING:** do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury.
> **Replace all batteries at the same time.**
>
> Where accidental ingestion of small batteries is possible, the label should include:
> Keep away from small children. If swallowed, promptly see doctor; have doctor phone (202) 625-3333 collect.

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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Requirements: Not necessary under normal conditions.

Respiratory Protection: Not necessary under normal conditions.

Eye Protection: Not necessary under normal conditions.

Gloves: Not necessary under normal conditions.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.):	Solid object
Upper Explosive Limits:	Not applicable for an Article
Lower Explosive Limits	Not applicable for an Article
Odor	No odor
Vapor Pressure (mm Hg @ 25°C)	Not applicable for an Article
Odor Threshold	No odor
Vapor Density (Air = 1)	Not applicable for an Article
pH	Not applicable for an Article
Density (g/cm^3)	2.0 – 3.0
Melting point/Freezing Point	Not applicable for an Article
Solubility in Water (% by weight)	Not applicable for an Article
Boiling Point @ 760 mm Hg (°C)	Not applicable for an Article
Flash Point	Not applicable for an Article
Evaporation Rate (Butyl Acetate = 1)	Not applicable for an Article
Flammability	Not applicable for an Article
Partition Coefficient	Not applicable for an Article
Auto-ignition Temperature	Not applicable for an Article
Decomposition Temperature	Not applicable for an Article
Viscosity	Not applicable for an Article

SECTION 10 – STABILITY AND REACTIVITY

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.

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SECTION 11 – TOXICOLOGICAL INFORMATION

Under normal conditions of use, alkaline batteries are non-toxic.

SECTION 12 – ECOLOGICAL INFORMATION

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.

SECTION 14 – TRANSPORT INFORMATION

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in “strong outer packaging” that prevents spillage of contents. All original packaging for Energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as “Dry cell” batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

All Energizer alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

SECTION 15 - REGULATORY INFORMATION

Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

SECTION 16 - OTHER INFORMATION

None.

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ENVIDOR® 2 SC MITICIDE

Version 3 / USA
102000011424
Revision Date: 02/07/2014
Print Date: 01/26/2016

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	ENVIDOR® 2 SC MITICIDE
Product code (UVP)	06328725
SDS Number	102000011424
EPA Registration No.	264-831

Relevant identified uses of the substance or mixture and uses advised against

Use	Insecticide, Miticide
Restrictions on use	See product label for restrictions.

Information on manufacturer

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

All Emergencies, 24hr/ 7 days	1-800-334-7577

Product Information
Telephone No.

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Skin sensitisation : Category 1
Carcinogenicity : Category 2

Signal word: Warning

Hazard statements

May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary statements

Avoid breathing mist and spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.
Specific measures (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Spirodiclofen	148477-71-8	22.30
Glycerine	56-81-5	10.00

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Eye contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Treatment Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Water, Dry chemical, Foam
Unsuitable	None known.
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Hydrogen chloride (HCl), Carbon monoxide (CO)

Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	Not relevant; aqueous solution
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Spirodiclofen	148477-71-8	0.39 mg/m3 (TWA)		OES BCS*
Glycerine (Total dust.)	56-81-5	15 mg/m3 (PEL)	02 2006	OSHA Z1
Glycerine (Respirable fraction.)	56-81-5	5 mg/m3 (PEL)	02 2006	OSHA Z1
Glycerine (Respirable fraction.)	56-81-5	5 mg/m3 (TWA)	1989	OSHA Z1A
Glycerine (Total dust.)	56-81-5	10 mg/m3 (TWA)	1989	OSHA Z1A
Glycerine (Total dust and mist.)	56-81-5	10 mg/m3 (TWA)	06 2008	TN OEL
Glycerine (Respirable fraction and dust or fume.)	56-81-5	5 mg/m3 (TWA)	06 2008	TN OEL
Glycerine (Particulate.)	56-81-5	50 ug/m3 (ST ESL)	02 2013	TX ESL
Glycerine (Particulate.)	56-81-5	5 ug/m3 (AN ESL)	02 2013	TX ESL
Glycerine (Vapor.)	56-81-5	100 ug/m3 (AN ESL)	02 2013	TX ESL

Glycerine (Vapor.)	56-81-5	1000 ug/m3 (ST ESL)	02 2013	TX ESL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Chemical resistant nitrile rubber gloves
Eye protection	Safety glasses with side-shields
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to beige
Physical State	viscous liquid suspension
Odor	slight
Odour Threshold	no data available
pH	4 - 6 (100 %)
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	1.09 g/cm³ at 20 °C
Evapouration rate	no data available
Boiling Point	no data available

Melting / Freezing Point	-17.8 °C / -0.0 °F
Water solubility	miscible
Minimum Ignition Energy	not applicable
Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	no data available
Viscosity	700 - 1,000 mPa.s at 23 °C
Flash point	Not relevant; aqueous solution
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	not applicable
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	no data available
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Eye contact, Skin contact, Skin Absorption
Immediate Effects	
Skin	Harmful if absorbed through skin. May cause sensitisation by skin contact.
Ingestion	Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity	LD50 (male/female combined rat) > 2,000 mg/kg
Acute inhalation toxicity	LC50 (male/female combined rat) > 3.146 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration. LC50 (male/female combined rat) > 12.58 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50.
Acute dermal toxicity	LD50 (male/female combined rat) > 4,000 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	No eye irritation (rabbit)
Sensitisation	Sensitising (guinea pig) OECD Test Guideline 406, Magnusson & Kligman test

Assessment repeated dose toxicity
Spirodiclofen did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity
Spirodiclofen was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity
Spirodiclofen caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver.
Spirodiclofen caused at high dose levels an increased incidence of tumours in rats in the following organ(s): uterus, testes. The tumours seen with Spirodiclofen were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers tumours in rodents is not relevant for the low exposures encountered under normal use conditions.

ACGIH
None.

NTP
None.

IARC

None.

OSHA
None.

Assessment toxicity to reproduction
Spirodiclofen did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity
Spirodiclofen did not cause developmental toxicity in rats and rabbits.

Further information
Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) > 0.035 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient spirodiclofen. No acute toxicity was observed at its limit of water solubility.
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) > 0.045 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient spirodiclofen. No acute toxicity was observed at its limit of water solubility.
Toxicity to aquatic plants	IC50 (Pseudokirchneriella subcapitata) > 0.06 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient spirodiclofen. No acute toxicity was observed at its limit of water solubility.
Biodegradability	Spirodiclofen: not rapidly biodegradable
Koc	Spirodiclofen: Koc:31097
Bioaccumulation	Spirodiclofen: Bioconcentration factor (BCF) 491 Does not bioaccumulate.
Mobility in soil	Spirodiclofen: Immobile in soil
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
Follow container label instructions for disposal of wastes generated during use in compliance with the product label.
Dispose in accordance with all local, state/provincial and federal regulations.

Contaminated packaging
Triple rinse containers.
Puncture container to avoid re-use.
Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.
If burned, stay out of smoke.

RCRA Information
Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 264-831

US Federal Regulations

TSCA list

Glycerine 56-81-5

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Spirodiclofen 148477-71-8

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Glycerine	56-81-5	MN

Canadian Regulations

Canadian Domestic Substance List

Glycerine	56-81-5

Environmental

CERCLA
None.
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Glycerine	56-81-5

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word:	Caution!
Hazard statements:	Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1	Flammability - 1	Instability - 0	Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1	Flammability - 1	Physical Hazard - 0	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 02/07/2014

This information is provided in good faith but without express or implied warranty. The customer assumes

all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	E

MATERIAL SAFETY DATA SHEET

Ferrous Sulfate

HEPTAHYDRATE - MONOHYDRATE

Manufacturer Information	
Product/Material:	Ferrous Sulfate Moist & Dried Heptahydrate & Monohydrate
Manufacturer's Name & Address:	QC Corporation 5566 Nash Road Cape Girardeau, MO 63701
Emergency Tel. No.:	410-486-0010
Chemtrec Number:	800-424-9300
Date Prepared:	1/01/12
Prepared By:	Jason Gordon

Section I - Product Identification	
Trade Name:	Ferrous Sulfate: Moist Heptahydrate, Dried Heptahydrate, Monohydrate
Synonym:	Copperas, Iron (II) Sulfate
Chemical Family:	Iron (II) Sulfate
Formula:	$FeSO_4 \cdot 7H_2O$ - Heptahydrate $FeSO_4 \cdot 1H_2O$ - Monohydrate
CAS:	7720-78-7 - Ferrous Sulfate 7782-63-0 - Heptahydrate 17375-41-6 - Monohydrate
HMIS:	H1 FO RO, Personal Protection Code-E (Safety glasses, gloves)
*DOT Category (only for packages containing 1,000 lbs. or more):	Other regulated substances, solid, N.O.S., 9, NA 3077, III, RQ (Ferrous Sulfate) *Per 49CFR 172.504 (f) (9), Class 9 placards are not required for domestic (USA ground) transportation, however shipments with packaging or bulk in excess of 1,000 lbs. each, will require a marking on a white square of 3077. Shipments with markings DO NOT require a driver CDL with hazardous endorsements.

Section II - Hazardous Ingredients	
Ferrous Sulfate:	$FeSO_4$ H_2O
OSHA PEL:	N.A.
ACGIH TLV (1979):	Rat. Oral LD50: 1480 mg/m^3
Other Limits:	None

Section III - Physical Data	
Boiling Point:	Decomposition at 300° C.
Vapor Pressure (mm Hg):	0
Vapor Density:	N.A.
Solubility in Water (20°C):	Heptahydrate: 48.50 gms in 100 ml Monohydrate: 29.65 gms in 100 ml
Appearance & Odor:	Heptahydrate: Blue-green, acidic/sour Monohydrate: Gray, acidic/sour
Specific Gravity:	Heptahydrate: 1.898 @ 25°C Monohydrate: 2.970 @ 25°C

Section IV - Fire and Explosion Hazard Data	
Flash Point;	None
Flammable Limits:	NAN.
LELA and UEL:	N.A.
Extinguishing Media:	N.A.
Special Firefighting Procedures:	N.A.
Unusual Fire & Explosion Hazards:	None

Section V - Reactivity Data	
Stability:	Stable
Incompatibility	Oxidizing Agents and Alkalies.
Conditions to Avoid:	Extremely high temperatures.
Hazardous Decomposition or By-products:	Products of sulfur oxides, i.e. SO_2 & SO_3
Hazardous Polymerization:	Will Not Occur

Section VI - Health Hazard Data	
Route(s) of Entry:	Inhalation (Yes); Skin (Yes), Ingestion (Yes); Eyes (Yes)
Inhalation:	Irritation to respiratory system.
Skin:	Mild irritant.
Eyes:	Will cause painful irritation.
Ingestion:	Ingestion of large quantities can produce GI tract disturbances, severe shock, vomiting, liver damage, tachycardia and death.
Carcinogenicity:	Not established.
Medical Conditions Generally Aggravated by Exposure:	Dermatitis, asthma, conjunctivitis, stomach or digestive problems.
Signs and Symptoms of Exposure:	Irritation or itching, stinging of eyes, breathing problems, stomach ache, acid or sour taste.
Emergency and First-Aid Procedures:	Flood skin and eyes with water for 15 minutes, consult physician. If inhaled, remove to fresh air, consult physician. If ingested, drink large amounts of water, induce vomiting, consult physician.

Section VII - Precautions for Safe Handling and Use	
Steps to be Taken in Case Material is Released or Spilled:	Sweep up and repackage or place in receptacle for future disposal.
Waste Disposal Method:	Remove to properly designated landfill or, if in solution, precipitate with alkali and filter off iron for removal to landfill with pH adjustments of the filtrate and discharge to sewer.
Precautions to be taken in Handling and Storage:	Wear gloves, safety goggles, breathing mask and coveralls when handling. Stored materials should be placed in a dry and reasonably temperatured area, preferably below 120°F.
Other Precautions:	None

Section VIII - Control Measures	
Respiratory Protection:	Dusk mask
Protective Gloves:	Work gloves
Eye Protection:	Safety goggles
Clothing:	Coveralls
Ventilation:	Local exhaust-none required. Special - None Mechanical - None Other - None
Work/Hygienic Practices:	Available safety showers as well as end of shift clean-up facilities.

(1)

QC CORPORATION

MATERIAL SAFETY DATA SHEET

Ferrous Sulfate

HEPTAHYDRATE - MONOHYDRATE

HEALTH 1
FLAMMABILITY 0
PERSONAL PROTECTION

Manufacturer Information	
Product/Material:	Ferrous Sulfate Moist & Dried Heptahydrate & Monohydrate
Manufacturer's Name & Address:	QC Corporation 4 Reservoir Circle, Suite 105 Baltimore, Maryland 21208
Emergency Tel. No.:	(410) 486-0010
Chemtrec Number:	(800) 424-9300
Date Prepared:	January 1, 1998
Prepared By:	Rita Hynd,

Section I - Product Identification	
Trade Name:	Ferrous Sulfate Moist Heptahydrate, Dried Heptahydrate, Monohydrate
Synonym:	Copperas, Iron (II) Sulfate
Chemical Family:	Iron (II) Sulfate
Formula:	$FeSO_4 \cdot 7H_2O$ - Heptahydrate $FeSO_4 \cdot H_2O$ - Monohydrate
CAS:	7782-63-0 - Heptahydrate 17375-41-6 - Monohydrate
NFPA:	HI PO RO; Personal Protection Code-B (Safety glasses, gloves, dust respirators)
DOT Category (only for packages containing 1,000 lbs or more):	Environmentally Hazardous Substances, solid, n.o.s., UN 3077, III, RQ (Ferrous Sulfate)

Section II - Hazardous Ingredients	
Ferrous Sulfate:	$FeSO_4 \cdot H_2O$
OSHA PEL:	N.A.
ACGIH TLV (1995):	Rat, Oral LD50: 1520 mg/kg
Other Limits:	None

Section III - Physical Data	
Boiling Point:	Decomposition at 300° C.
Vapor Pressure (mm Hg):	0
Vapor Density:	N.A.
Solubility in Water (20°C):	Heptahydrate: 48.50 gms in 100 ml Monohydrate: 29.65 gms in 100 ml
Appearance & Odor:	Heptahydrate: Blue-green crystalline solid/dust Monohydrate: Grey, acidic odor
Specific Gravity:	Heptahydrate: 1.898 @ 25°C Monohydrate: 2.870 @ 25°C

Section IV - Fire and Explosion Hazard Data	
Flash Point:	None
Flammable Limits:	N.A.
LEL and UEL:	N.A.
Extinguishing Media:	N.A.
Special Firefighting Procedures:	N.A.
Unusual Fire & Explosion Hazards:	None

Section V - Reactivity Data	
Stability:	Stable
Incompatibility:	Oxidizing Agents and Alkalies.
Conditions to Avoid:	Extremely high temperatures.
Hazardous Decomposition or Byproducts:	Products of sulfur oxides, i.e.: SO_2 and SO_3.
Hazardous Polymerization:	Will not occur.

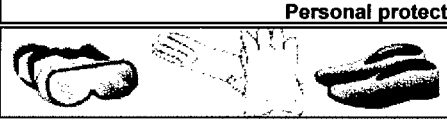
Section VI - Health Hazard Data	
Route(s) of Entry: Inhalation:	Inhalation (Yes): Skin (Yes) Ingestion (Yes): Eyes (Yes) Irritation to respiratory system.
Skin:	Mild irritant.
Eyes:	Will cause painful irritation.
Ingestion:	Moderately toxic by hazard during normal industrial use.
Carcinogenicity:	Not established.
Medical Conditions Generally Aggravated by Exposure:	Dermatitis, asthma, conjunctivitis, stomach or digestive problems.
Signs and Symptoms of Exposure:	Irritation or itching, stinging of eyes, breathing problems, stomach ache, acid or sour taste.
Emergency and First Aid Procedures:	Flush skin and eyes with water for 15 minutes minimum, remove to fresh air, cover if in shock, remove to physician care.

Section VII - Precautions for Safe Handling and Use	
Steps to be Taken in Case Material is Released or Spilled:	Sweep up and repackage or place in suitable container.
Waste Disposal Method:	Dispose in properly designated landfill or, if in solution, precipitate with alkali and filter off iron for removal to landfill with pH adjustments of the filtrate and discharge to sewer.
Precautions to be Taken in Handling and Storage:	Wear gloves, safety goggles, breathing mask and coveralls when handling. Stored materials should be placed in a dry and reasonably temperatured area, preferably below 75° F.
Other Precautions:	None

Section VIII - Control Measures	
Respiratory Protection:	Dust Mask
Protective Gloves:	Work Gloves
Eye Protection:	Goggles
Clothing:	Coveralls
Ventilation:	Local Exhaust - None Special - None Mechanical - None Other - None
Work/Hygienic Practices:	Available safety showers as well as end of shift clean up facilities.

Diversey

FLOOR SCIENCE Stripper

HMIS		NFPA	Personal protective equipment
Health	3	3	
Fire Hazard	0	0	
Reactivity	0	0	

Version Number: 2

Preparation date: 2011-05-19

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: FLOOR SCIENCE Stripper

MSDS #: MS0500099
Product Code: 5116002
Recommended use: Floor stripper. This product is intended to be diluted prior to use.

Manufacturer, importer, supplier:

US Headquarters
Diversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-1964
Phone: 1-888-352-2249
MSDS Internet Address: www.diversey.com

Canadian Headquarters
Diversey, Inc. - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
DANGER. CORROSIVE. CAUSES SKIN AND EYE BURNS. HARMFUL OR FATAL IF SWALLOWED.

Principal routes of exposure: Eye contact. Skin contact. Inhalation.
Eye contact: Corrosive. Causes permanent eye damage, including blindness.
Skin contact: Corrosive. Causes permanent damage.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract.
Ingestion: Corrosive. Causes burns to mouth, throat and stomach.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral - Rat (mg/kg)	LD50 Dermal - Rabbit	LC50 Inhalation - Rat
Sodium hydroxide	1310-73-2	5 - 10%	Not available	1350 mg/kg	Not available
Monoethanolamine	141-43-5	5 - 10%	1720	1 mL/kg 1025 mg/kg	Not available
Ethyl alcohol	64-17-5	0.1 - 1.5%	7060	Not available	124.7 mg/L (4 h)

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with running water for 15-20 minutes, keeping eyelids open. Get medical attention immediately.
Skin contact: Immediately flush with plenty of water for 15-20 minutes . Get medical attention immediately.
Inhalation: If breathing is affected, remove to fresh air. Get medical attention immediately.
Ingestion: If swallowed, rinse mouth. Give a cupful of water or milk . THEN IMMEDIATELY CONTACT A PHYSICIAN OR POISON CENTER. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Aggravated Medical Conditions: Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Not applicable
Unusual hazards: None known
Specific methods: No special methods required

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: No information available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment
Environmental precautions and clean-up methods: Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin, eyes and clothing. Do not taste or swallow. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Wash thoroughly after handling. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. FOR COMMERICAL AND INDUSTRIAL USE ONLY.
Storage:
Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels Respiratory protection is not required if good ventilation is maintained.

Personal Protective Equipment

Eye protection: Chemical-splash goggles.
Hand protection: Chemical-resistant gloves
Skin and body protection: Protective footwear. If major exposure is possible, wear suitable protective clothing and footwear.
Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Sodium hydroxide	1310-73-2	2 mg/m³ (Ceiling)	2 mg/m³ (TWA)	2 mg/m³ (Ceiling)
Monoethanolamine	141-43-5	6 ppm (STEL) 3 ppm (TWA)	3 ppm (TWA) 6 mg/m³ (TWA)	6 ppm (STEL) 15 mg/m³ (STEL) 3 ppm (TWA) 8 mg/m³ (TWA)
Ethyl alcohol	64-17-5	1000 ppm (STEL)	1000 ppm (TWA) 1900 mg/m³ (TWA)	1000 ppm (TWA) 1900 mg/m³ (TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Liquid
Specific gravity: 1.089
Vapor density: No information available
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Solubility in other solvents: No information available
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0 % by wt.
pH: No information available
Explosion limits: - upper: Not determined **- lower:** Not determined

Bulk density: No information available
Evaporation Rate No information available
Color: Clear Colorless
Odor: No Odor/Odorless
Melting point/range: Not determined
Autoignition temperature: No information available
Density: 9.08 lbs/gal Kg/L
Flash point: °F °C
Viscosity: No information available
VOC: 5.1 % *
Dilution pH: No information available.

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur
Hazardous decomposition products: None reasonably foreseeable.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Corrosive Oral LD50 estimated to be between 2000 - 3000 mg/kg Dermal LD50 estimated to be > 2000 mg/kg
Component Information: See Section 3

Chronic toxicity: None known

Specific effects
Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Dispose of according to all federal, state and local applicable regulations

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Please refer to the Diversey HazMat Library, http://naextranet.diversey.com/dot/, for up to date shipping information.

15. REGULATORY INFORMATION

International Inventories at CAS# Level
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Sodium hydroxide	1310-73-2	X	X	X	X
Monoethanolamine	141-43-5	X	X	X	X
Ethyl alcohol	64-17-5	X	X	X	X
Water	7732-18-5	-	-	-	-

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Sodium hydroxide	1310-73-2	5 - 10%	1000		

SARA 311/312 Hazard Categories
Immediate: X
Delayed: -
Fire: -

Reactivity: -

Sudden Release of Pressure: -

Canada

WHMIS hazard class: E Corrosive material

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: None

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MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : FLUORESCENT ORANGE SPRAY PAINT
IDENTIFICATION NUMBER: 203036
DATE PRINTED : 09/19/01

PRODUCT USE/CLASS : I.C. WATER BASED MARKING PAINT

SUPPLIER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
8:00 AM-4:30 PM/24-hr Emer.Assist

MANUFACTURER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
8:00 AM-4:30 PM/24-hr Emer.Assist

PREPARER: MTM, PHONE: 847-816-2445, PREPARE DATE: 09/19/01

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % LESS THAN
01	LIQUIFIED PETROLEUM GAS	68476-85-7	25.0 %
02	TOLUENE	108-88-3	15.0 %
03	ALIPHATIC PETROLEUM DISTILLATES	64742-89-8	10.0 %
04	Hydrotreated Light Distillate	64742-47-8	10.0 %
05	Calcium Carbonate (Limestone)	1317-65-3	5.0 %
06	Stoddard Solvent	8052-41-3	5.0 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	MEXICAN TLV-TWA	SKIN
01	1000 PPM	N.E.	1000 PPM	N.E.	N.E.	NO
02	50 PPM	150 PPM	200 PPM	300 PPM	N.E.	YES
03	300 PPM	N.E.	300 PPM	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO
05	10mg/m3	N.E.	15mg/m3	N.E.	N.E.	NO
06	100ppm	N.E.	100ppm	N.E.	100 PPM	NO

(See Section 16 for abbreviation legend)

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: Harmful if inhaled. Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May effect the brain or nervous system causing
dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects
in humans have included liver and cardiac abnormalities.

PRIMARY ROUTE(S) OF ENTRY: SKIN ABSORPTION INHALATION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Hold eyelids apart and flush with plenty of water for at lease 15 minutes. Get medical attention.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: -99 F

LOWER EXPLOSIVE LIMIT: 1.0 %
UPPER EXPLOSIVE LIMIT: 9.5 %

AUTOIGNITION TEMPERATURE: ND

EXTINGUISHING MEDIA: DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 DEG. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate the area, remove all sources of ignition and ventilate well. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 degrees F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 degrees F.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace

conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: -34 - 383 F	VAPOR DENSITY	: Is heavier than air
ODOR	: SOLVENT	ODOR THRESHOLD	: ND
APPEARANCE	: LIQUID	EVAPORATION RATE	: Is faster than Ether
SOLUBILITY IN H2O	: SOLUBLE		
FREEZE POINT	: ND	SPECIFIC GRAVITY	: 0.9611
VAPOR PRESSURE	: ND	pH @ 0.0 %	: ND
PHYSICAL STATE	: LIQUID	VISCOSITY	: ND

COEFFICIENT OF WATER/OIL DISTRIBUTION: ND

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid temperatures above 120 degrees F. Avoid all possible sources of ignition.

(Continued on Page 5)

Product: 203036 Preparation Date: 09/19/01 Page 5

SECTION 10 - STABILITY AND REACTIVITY

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

COMPONENT TOXICOLOGICAL INFORMATION:

CHEMICAL NAME	LD50	LC50
LIQUIFIED PETROLEUM GAS	N.E.	N.E.
TOLUENE	RAT 5000MG/KG	MOUSE 5320PPM 8HR
ALIPHATIC PETROLEUM DISTILLATES	No Information	No Information
Hydrotreated Light Distillate	No Information	No Information
Calcium Carbonate (Limestone)	No Information	No Information
Stoddard Solvent	4900mg/kg(rat)	N.E.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Product is a mixture of listed components. According to our raw material suppliers, all components are listed on the TSCA inventory as required or meet the polymer exemption as defined in Section 5.5.2 of the Toxic Substances Control Act.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: AEROSOL

DOT TECHNICAL NAME:

DOT HAZARD CLASS: 2 HAZARD SUBCLASS: 1

(Continued on Page 6)

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SECTION 14 - TRANSPORTATION INFORMATION

DOT UN/NA NUMBER: UN1950 PACKING GROUP: RESP. GUIDE PAGE: 126

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA - SARA HAZARD CATEGORY:
This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % IS LESS THAN
TOLUENE	108-88-3	15.0 %

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
WATER DEIONIZED	7732-18-5
FLUORESCENT RESIN	39277-28-6

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
WATER DEIONIZED	7732-18-5
FLUORESCENT RESIN	39277-28-6
Barium Sulfate	7727-43-7

(Continued on Page 7)

Product: 203036 Preparation Date: 09/19/01 Page 7

SECTION 15 - REGULATORY INFORMATION

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
TOLUENE	108-88-3

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: A B5 D2A D2B

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2* FLAMMABILITY: 4 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 09/19/01

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

: No Information.

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all

Federal, State, and Local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FOAMEX

PRODUCT CODE: PK 0180

GENERAL USE: Cleaning agent

PRODUCT DESCRIPTION: Clear amber liquid, characteristic odor

PowerKleen
Quality Chemicals • Superior Service

MANUFACTURER'S NAME Power Kleen Corporation	DATE PREPARED: June 1, 2011 SUPERSEDES: February 1, 2011	Page 1 of 4
ADDRESS (NUMBER, STREET, P.O. BOX) 101 South Bayview Blvd	TELEPHONE NUMBER FOR INFORMATION (813) 854-2648	
(CITY, STATE AND ZIP CODE) COUNTRY Oldsmar, FL 34677 USA	EMERGENCY TELEPHONE NUMBER ChemTel Inc. 1- (800) 255-3924 Intl. + 01 (813) 248-0585	

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Mild liquid, moderately toxic, contact with eyes may cause severe irritation, prolonged contact with skin may cause irritation. Ingestion may cause gastric distress. Hazard Symbols for this product - Xn, Risk Phrases - R20/21/22, 36/38

POTENTIAL HEALTH EFFECTS

INHALATION: Corrosive and irritating to upper respiratory tract and mucous membranes; may cause headache, dizziness, nausea, vomiting and malaise.

SKIN: Corrosive and irritating; chemical burns may result from contact; severe irritant; prolonged contact may cause moderate reddening, swelling and possible necrosis.

EYES: CORROSIVE; Contact with eyes is painful and irritating and will cause chemical burns, associated with redness and swelling of the conjunctiva.

INGESTION: Corrosive and irritating to digestive tract; may cause gastric distress, stomach pains and vomiting; moderately toxic, may result in red blood cell hemolysis.

CARCINOGENICITY NTP? No IARC MONOGRAPHS? No OSHA REGULATED? No

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	EINECS #	% (by weight)	OSHA PEL PPM	OSHA PEL MG/M3	ACGIH TWA PPM	ACGIH TWA MG/M3	RQ LBS
Ethylene glycol monobutyl ether (a,b)	111-76-2	203-905-0	10 - 30	50	240	20		
Potassium hydroxide (c,d)	1310-58-3	215-181-3			2 C		2 C	1000
Sodium dodecylbenzene sulfonate (c)	25155-30-0	248-289-44			not established			1000
Sodium metasilicate	6834-92-0	229-912-9			6			

The remaining components of this product are non-hazardous or are in small enough quantities as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product.

(a,c) See Section 15

(b) Indicates an employee's skin exposure shall be prevented or reduced to the extent necessary in the circumstances through the use of gloves, coveralls, goggles, or other appropriate equipment.

(d) A "C" in the OSHA PEL or ACGIH TWA column indicates ceiling limits, the concentration that should not be exceeded during any part of the working exposure.

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; wash mouth and nasal passages with water repeatedly; if breathing difficulties persist seek medical attention.

SKIN: Wash contacted area with soap and water; DO NOT attempt to neutralize with chemical agents; if irritation persists, seek medical attention.

EYES: Remove contact lenses. Immediately flush eyes for 15 minutes in clear running water while holding eyelids open; seek medical attention immediately.

INGESTION: Drink large quantities of water or milk; give diluted vinegar or lemon juice to conscious person; DO NOT induce vomiting; seek medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	LEL: Not applicable	UEL: Not applicable
> 200° F (> 93.3° C)	AUTOIGNITION TEMPERATURE:	Not determined	NFPA CLASS: IIIB

GENERAL HAZARDS: Product will support combustion. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

EXTINGUISHING MEDIA
Carbon dioxide, water fog, dry chemical, chemical foam.

FIRE FIGHTING PROCEDURES
Self - contained respiratory equipment; cool containers to prevent pressure buildup and possible explosion when exposed to extreme heat. Caution - material will support combustion!

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers can explode due to buildup of pressure when exposed to extreme heat.

HAZARDOUS COMBUSTION PRODUCTS
Smoke, fumes, oxides of carbon

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Material is alkaline and will irritate the eyes if product is allowed to directly contact the eyes. Wash small spills to sanitary sewer. Confine large spill, soak up with approved absorbent, shovel product into approved container; for spills in excess of allowable quantities (RQ) notify the National Response Center (800) 424 - 8802; refer to SARA Title III, Section 313 40 CFR 372, and CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. Keep this and other chemicals out of reach of children.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

The use of local exhaust ventilation is recommended. Use corrosion-resistant ventilation equipment.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: None required while threshold limits (Section 2) are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

PROTECTIVE GLOVES: Neoprene or rubber gloves with cuffs.

EYE PROTECTION: Goggles with side shields; safety eyebath nearby. Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls, apron, or other equipment should be worn to minimize skin contact.

WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Clear amber liquid, characteristic odor	VAPOR DENSITY (AIR = 1) > 1
SPECIFIC GRAVITY (WATER = 1) 1.08	EVAPORATION RATE (Water = 1) > 1
SOLUBILITY IN WATER Complete	% VOLATILE (BY WEIGHT) 70.00%
pH 13.0	VAPOR PRESSURE 17 mm Hg @ 20° C
BOILING POINT 212° F (100° C)	FREEZING POINT 32° F (0° C)
VISCOSITY Like that of water	VOLATILE ORGANIC COMPOUNDS (VOC's) Not determined

SECTION 10 - STABILITY AND REACTIVITY

STABILITY UNSTABLE: STABLE: X	CONDITIONS TO AVOID: Extreme temperatures.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.

HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: X	CONDITIONS TO AVOID: None

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD50 of Ingredient Species and Route	LC50 of Ingredient Species
Ethylene glycol monobutyl ether (a,b)	111-76-2	203-905-0	470 mg / kg Oral - rat	450 ppm / 4H Inhalation - rat
Potassium hydroxide (c,d)	1310-58-3	215-181-3	273 mg / kg Oral - rat	Not established
Sodium dodecylbenzene sulfonate (c)	25155-30-0	248-289-44	Not established	Not established
Sodium metasilicate	6834-92-0	229-912-9	Not established	Not established
(a,c) See Section 15				

SECTION 12 - ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Refer to 40 CFR 260 - 299 for complete waste disposal regulations for alkaline materials. Consult your local, state, or federal agency before disposing of any chemicals.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Corrosive Liquids, N.O.S., (Contains Potassium Hydroxide)

DOT HAZARD CLASS / Pack Group: 8 / III
REFERENCE: 49 CFR 173.154, .203, .241
UN / NA IDENTIFICATION NUMBER: UN 1760
LABEL: CORROSIVE
HAZARD SYMBOLS: C

IATA HAZARD CLASS / Pack Group: 8 / III
IMDG HAZARD CLASS: 8 / III
RID/ADR Dangerous Goods Code: 8
UN TDG Class / Pack Group: 8 / III
Hazard Identification Number (HIN): 80

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

SECTION 15 - REGULATORY INFORMATION

TSCA (Toxic Substance Control Act)
All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
311/312 Hazard Categories
Immediate health

313 Reportable Ingredients:
(a) Indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CERCLA (Comprehensive Response Compensation and Liability Act)
(c) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture > 24,000 lbs) or greater amounts, according to 40 CFR 302.

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986
There are no reportable chemicals present known to the state of California to cause cancer or reproductive toxicity.

CPR (Canadian Controlled Products Regulations)
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: D1A, D2B

IDL (Canadian Ingredient Disclosure List)
Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 3.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)
Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 3 unless otherwise indicated.

EINECS (European Inventory of Existing Commercial Chemical Substances)
Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

WGK Water Quality Index: 1 **VbK Index: Not applicable**

Risk Phrases	SYMBOL(S) REQUIRED FOR LABEL	Safety Phrases
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R36/38 Irritating to eyes and skin.	Harmful	S2 Keep out of the reach of children. S36/37 Wear suitable protective clothing and gloves. S46 If swallowed, seek medical advice immediately and show this container or label.

SECTION 16 - OTHER INFORMATION

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.

HMIS HAZARD RATINGS

HEALTH	1	* = Chronic Health Hazard	2 = MODERATE
FLAMMABILITY	1	0 = INSIGNIFICANT	3 = HIGH
PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME
PERSONAL PROTECTIVE EQUIPMENT	C	Safety Glasses, Gloves, Apron	

REVISION SUMMARY:
This MSDS has been revised in the following sections:
Complete format update

MSDS Prepared by:
Jamson Laboratories, Inc.
101 South Bayview Blvd.
Oldsmar, FL 34677 USA
(813) 855 - 4565 www.jamsonlabs.com

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

BAUSCH + LOMB

FogShield XP™

MATERIAL SAFETY DATA SHEET

Section 1: IDENTIFICATION

PRODUCT:

Product Name: FogShield XP™
Product Description: Dilute solvent and surfactant solution
Product Code(s): 77, 8577
Intended Use: Cleaning agent for glass and plastic lenses

COMPANY IDENTIFICATION:

Bausch & Lomb, Incorporated
1400 N. Goodman Street
Rochester, New York 14609

For Information: 1-800-553-5340

EMERGENCY TELEPHONE NUMBER:

24-Hour Emergency: 1-800-535-5053

Section 2: HAZARD(S) IDENTIFICATION

CLASSIFICATION: Flammable liquid; Category 3
Eye irritation; Category 2A

LABELING:

Pictograms:

Signal Word: Warning

Hazard Statements: Flammable liquid and vapor
Causes serious eye irritation

Precautionary Statements: Keep away from ignition sources such as heat/sparks/open flames – No smoking
Not For Use on Contact Lenses
Store in a cool, well-ventilated place
Use only in accordance with label instructions.
Avoid release to the environment.
Keep Out of Reach of Children

This product is intended to be used as a lens cleaning agent for eyeglasses, safety glasses, face shields or other similar glass and plastic lens materials. If you are sensitive to any of its components, do not use. Use only in accordance with label instructions.

Section 2: HAZARD(S) IDENTIFICATION (cont.)

POTENTIAL HEALTH EFFECTS

EYE:

Avoid contact with the eye. May cause severe eye irritation.

SKIN:

Frequent or prolonged contact with skin or mucous membranes may cause irritation or dryness.

INGESTION:

Not expected to be an exposure route. However, may cause gastric and intestinal irritation if ingested.

INHALATION:

Not expected to be a significant exposure route. Vapor or mist may be irritating to mucous membranes and upper respiratory tract.

CHRONIC HEALTH EFFECTS

None identified.

CARCINOGENICITY:

NTP: NA
IARC: (CAS# 67-63-0) Group 3, not classifiable for human.
OSHA: NA

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	Chemical Identitiy	Concentration, % W/W	EINECS / ELINCS #
67-63-0	Isopropyl Alcohol	11	200-661-7
067674673	Silicone	Proprietary	NA
68937-55-3	Silicone Polyether Copolymer	Proprietary	NA
126-92-1	2-Ethylhexyl Sodium Sulfate Solution	Proprietary	204-812-8
7732-18-5	Water	Proprietary	231-791-2

Section 4: FIRST AID MEASURES

INHALATION:

Normal use of this product does not pose an inhalation hazard. However, should respiratory tract irritation develop, discontinue use and remove to fresh air. Get medical attention if irritation or other symptoms develop or persist.

Section 4: FIRST AID MEASURES (cont.)

SKIN CONTACT:

Should irritation develop, discontinue use. Wash affected skin thoroughly with soap and water. Get medical attention if irritation or other symptoms develop or persist.

EYE CONTACT:

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

INGESTION:

If swallowed, DO NOT induce vomiting. Seek medical attention immediately.

NOTE TO PHYSICIAN:

Material if ingested may be aspirated into the lungs and can cause chemical pneumonitis. Treat appropriately.

Section 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

Carbon dioxide, dry chemical powder, appropriate foam or water fog.

HAZARDOUS COMBUSTION PRODUCTS:

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

As in any fire, wear self-contained breathing apparatus and full protective gear to prevent contact with skin and eyes.

Section 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear suitable protective eyewear, clothing, respiratory protection, rubber boots and rubber gloves.
Shut off all sources of ignition. Evacuate immediate area. Ensure adequate ventilation. Refer to Sections 7 and 8.

ENVIRONMENTAL PRECAUTIONS:

Prevent spilled material from entering storm sewers or drains, waterways, and contact with soil.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

Isolate hazard area. Prevent from entering drains and sewers. Cover with vermiculite or other suitable inert material, pick up and place in closed containers. Transport outdoors and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Refer to Section 13 for appropriate disposal procedures.

Section 7: HANDLING AND STORAGE

HANDLING:

Avoid contact with eyes. Avoid prolonged or repeated exposure to skin or mucous membranes, and breathing mists/vapors. Use in a well ventilated area, away from all ignition sources. Wash thoroughly with soap and water after handling.

STORAGE:

Store product at room temperature, in a well ventilated place. Discard appropriately if package integrity is compromised.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS:

		OCCUPATIONAL EXPOSURE LIMITS / GUIDELINES										
		OSHA PEL		ACGIH TLV		NIOSH REL		IRELAND		HSE		
CAS #	COMPONENT NAME	TWA /STEL		TWA /STEL		TWA /STEL		TWA /STEL		TWA /STEL		UNITS
67-63-0	Isopropyl Alcohol	400	NE	200	400	400	500	400	500	400	500	ppm
067674673	Silicone	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA
68937-55-3	Silicone Polyether Copolymer	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA
126-92-1	2-Ethylhexyl Sodium Sulfate Solution	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA
7732-18-5	Water	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA

N/E: Not Established
TWA: 8-Hour Time-Weighted Average
N/A: Not Applicable
ACGIH: American Conference of Governmental Industrial Hygienists
NIOSH: National Institute for Occupational Safety & Health
OSHA: Occupational Safety & Health Administration
PPM: Parts Per Million
STEL: Short-Term Exposure Limit
C: Ceiling Limit
REL: Recommended Exposure Limit

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS:

Use with good general ventilation. No special controls required.

RESPIRATORY PROTECTION:

No special controls or personal protection required under conditions of intended use.

In the event of a spill, a NIOSH-certified air-purifying respirator with organic vapor cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits and when adequate oxygen is present. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release or any other circumstances where air purifying respirators may not provide adequate protection.

EYE PROTECTION:

Avoid contact with the eye. No special controls or personal protection required under conditions of intended use**.**

In the event of a spill, appropriate eye protection should be worn.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION (cont.)

SKIN PROTECTION:

No special controls or personal protection required under conditions of intended use.

In the event of a spill, use rubber gloves.

ADDITIONAL PROTECTIVE CLOTHING & EQUIPMENT:

NA

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Clear
Odor:	Slight alcohol odor
Odor Threshold:	Not determined
pH-Value:	5-9
Melting Point:	Not applicable
Freezing Point:	Not determined
Initial Boiling Point:	Not determined
Flash Point:	42.2°C (108°F) ASTM Method D3828-98
Evaporation Rate:	Not determined
Flammability (solid,gas):	Flammable
Explosion Limits:	Not determined
Vapor Pressure:	Not determined
Vapor Density:	Not determined
Specific Gravity (H_2O=1):	0.987
Solubility:	Soluble in water
Partition Coefficient:	Not applicable
Auto-Ignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Viscosity:	Not determined

Section 10: STABILITY AND REACTIVITY

REACTIVITY:

No known hazards.

CHEMICAL STABILITY:

Stable under normal conditions.

POSSIBILITY OF HAZARDOUS REACTIONS:

None are known.

CONDITIONS TO AVOID:

Heat, sources of ignition.

Section 10: STABILITY AND REACTIVITY (cont.)

INCOMPATIBLE MATERIALS:

Keep away from heat, sparks, and flames.

HAZARDOUS DECOMPOSITION:

None known

Section 11: TOXICOLOGICAL INFORMATION

RTECS No.: **NT8050000**

Isopropyl Alcohol

Toxicity Data:	ORL-RAT	LD50: 5045 MG/KG
	IHL-RAT	LC50: 16000 PPM/8H
	SKN-RBT	LD50: 12800 MG/KG
Irritation Data:	EYE-RBT	100 MG SEV
	SKN-RBT	500 MG (MILD)

RTECS No.: **MP0700000**

2-Ethylhexyl Sodium Sulfate

Toxicity Data:	ORL-RAT	LD50: 4 GM/KG

NOTE: Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

Section 12: ECOLOGICAL INFORMATION

No specific ecological data are available for this product.

Section 13: DISPOSAL CONSIDERATIONS

All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the sole responsibility of the waste generator.

Section 14: TRANSPORT INFORMATION

	US DOT	IATA	IMO	RID/ADR	Canadian TDG
Shipping Name:	Consumer Commodity	Consumer Commodity	No information available	No information available	No information available
Hazard Class:	9	9			
UN Number:	ID8000	ID8000			
Package Group:	III	III			

Section 15: REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200):

FogShield XP™ is considered hazardous under the Occupational Safety & Health Administration Hazard Communication Standard.

REACH:

This product is exempt from REACH requirements.

TOXIC SUBSTANCE CONTROL ACT (TSCA):

All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA TITLE III (Superfund Amendments and Reauthorization Act):

SECTION 302 (Extremely Hazardous Substances):	No Components Listed
SECTION 311, 312 (Hazard Categories):	Acute, Chronic
SECTION 313 (Toxic Chemicals):	No Components Listed

CALIFORNIA PROPOSITION 65:

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Section 16: OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate. However, neither Bausch & Lomb Incorporated nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE IS MADE. In no event shall Bausch & Lomb Incorporated or any of its subsidiaries be liable for any special, incidental or consequential damages.

Material Safety Data Sheet

Zep Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-I-BUY-ZEP (428-9937)
www.zep.com

Superior Solutions

Section 1. Chemical Product and Company Identification

Product name FORMULA 50
Product use General Purpose Cleaner
Product code 0859
Date of issue 06/08/09 **Supersedes** 08/11/08

1178

WITHLACOOCHEE RIVER ELEC CO-OP
14639 21ST ST
DADE CITY FL 33523-2920

Printing date: 06/08/09

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 1-877-I-BUY-ZEP (428-9937)

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By
Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

DANGER !

CAUSES EYE BURNS. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.

*Hazard Determination System (HDS): Health, Flammability, Reactivity

2	0	0

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Dermal contact. Eye contact. Inhalation.

Eyes Causes eye burns. Direct contact with the eyes can cause irreversible damage, including blindness.

Skin Causes skin irritation. Harmful if absorbed through the skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.

Inhalation Avoid breathing vapors, spray or mists. Inhalation of the spray or mist may produce severe irritation of respiratory tract, characterized by coughing, choking or shortness of breath. Can cause central nervous system (CNS) depression.

Ingestion Harmful if swallowed. May cause burns to mouth, throat and stomach.

Chronic effects Overexposure of this product by inhalation or absorption can produce central nervous system depression resulting in headache, nausea and/or dizziness. Contains material which may cause damage to the following organs: blood, kidneys, liver.

Carcinogenicity
Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
None.						

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
ETHYLENE GLYCOL MONOBUTYL ETHER; 2-butoxyethanol; butyl cellosolve	111-76-2	1 - 5
SODIUM METASILICATE; silicic acid (H2-Si-O3) disodium salt; water glass	6834-92-0	1 - 5
SODIUM DODECYLBENZENE SULFONATE; linear alkyl aryl sodium sulfonate; Sodium DDBSA	25155-30-0	1 - 5
TETRASODIUM ETHYLENEDIAMINE TETRAACETATE; ethylenediamine tetraacetic acid; tetrasodium salt	64-02-8	1 - 5

Section 4. First Aid Measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Skin Contact Flush affected skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Inhalation Move exposed person to fresh air. Get medical attention if adverse health effects persist or are severe.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. If affected person is conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)

Flash Point None.

Flammable Limits Not applicable

Flammability Non-combustible.

Fire hazard May emit toxic fumes under fire conditions.

Fire-Fighting Procedures Use an extinguishing agent suitable for the surrounding fire. Do not release runoff from fire to sewers or waterways.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Use with adequate ventilation. Do not ingest. Do not reuse container. Wash thoroughly after handling. Observe label precautions.

Storage Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C). Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
ETHYLENE GLYCOL MONOBUTYL ETHER; 2-butoxyethanol; butyl cellosolve	**ACGIH TLV (United States). Skin** TWA: 20 ppm 8 hour(s). Form: **OSHA PEL (United States). Skin** TWA: 50 ppm 8 hour(s). Form:
SODIUM METASILICATE; silicic acid (H2-Si-O3) disodium salt; water glass	**Supplier Suggested (United States).** CEIL: 2 mg/m³ Form:

Personal Protective Equipment (PPE)

Eyes Splash goggles.

Body Wear appropriate protective clothing to prevent skin contact. Recommended: Neoprene gloves. Nitrile gloves. Rubber gloves. Synthetic apron.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate.

Section 9. Physical and Chemical Properties

Physical State Liquid.

pH 12.5 - 13.5

Boiling Point 104.44°C (220°F)

Specific Gravity 1.07

Solubility Easily soluble in the following materials: cold water and hot water.

Color Clear. Dark Blue.

Odor Mild.

Vapor Pressure Not determined.

Vapor Density Not determined.

Evaporation Rate 1 (Water = 1)

VOC (Consumer) 42.3 (g/l). 0.35 lbs/gal (3.96%)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Reactive or incompatible with the following materials: oxidizing materials and acids.

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products carbon oxides (CO, CO_2)

Section 11. Toxicological Information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethylene Glycol Monobutyl Ether	LD50 Dermal	Guinea pig	>2000 mg/kg	-
	LD50 Oral	Guinea pig	1200 mg/kg	-
	LC50 Inhalation Vapor	Guinea pig	>633 ppm	1 hours
Sodium Metasilicate	LD50 Oral	Rat	1153 mg/kg	-
	LD50 Oral	Mouse	770 mg/kg	-
Sodium Dodecylbenzene Sulfonate	LD50 Oral	Mouse	2000 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
Tetrasodium Ethylenediamine Tetraacetate	LD50 Oral	Rat	4100 mg/kg	-

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Not available.

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: D002
Classification: - [Hazardous waste]
Origin: - [RCRA waste.]

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	Not regulated.	Not a DOT controlled material (United States).			

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG* : Packing group

Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:

Product name

Ethylene Glycol Monobutyl Ether

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Sodium Dodecylbenzene Sulfonate

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations

California Prop 65 No products were found.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.*

Clorox Professional Products Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product:	COMMERCIAL SOLUTIONS® FORMULA 409® CLEANER DEGREASER DISINFECTANT	
Description:	CLEAR TO SLIGHT YELLOW THIN LIQUID WITH SOLVENT AND LEMON ODOR	
Other Designations	**Distributor**	**Emergency Telephone Nos.**
EPA Reg. No. 5813-55-67619	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call 1-800-446-1014 For Transportation Emergencies, call Chemtrec 1-800-424-9300

II Health Hazard Data

CAUTION: EYE IRRITANT. Avoid eye and prolonged skin contact. Do not ingest.

No medical conditions are known to be aggravated by exposure to this product.

FIRST AID:

EYE CONTACT: Immediately flush eyes with plenty of water. If irritation persists, see a doctor.

SKIN CONTACT: Wash with water. Seek medical attention if irritation develops or persists.

INGESTION: Drink a glassful of water. Call a physician. Do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person.

INHALATION: If breathing problems develop remove to fresh air. Seek medical attention if respiratory irritation develops or breathing becomes difficult.

KEEP OUT OF REACH OF CHILDREN.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Alkyl (40% C_{12}, 50% C_{14}, 10% C_{16}) dimethyl benzyl ammonium chlorides CAS# 68424-85-1	0.3%	Not established.
2-Butoxyethanol CAS # 111-76-2	3 - 7%	20 ppm - skin TLV-TWA[a] 50 ppm - skin PEL[b]

Note that 2-butoxyethanol can be absorbed through the skin. This may contribute to overall exposure.

[a]TLV-TWA = ACGIH Threshold Limit Value - Time Weighted Average
[b]PEL = OSHA Permissible Exposure Limit - Time Weighted Average

None of the materials in this product are on the IARC, OSHA, or NTP carcinogen lists.

IV Special Protection and Precautions

Hygienic Practices: Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods.

Engineering Controls: Use general ventilation to minimize exposure to vapor or mist.

Personal Protective Equipment: Wear safety glasses. Wear rubber or neoprene gloves if there is the potential for repeated or prolonged skin contact. In situations where exposure limits may be exceeded, a NIOSH-approved respirator is advised.

Not recommended for use on soft vinyl, varnishes, or aluminum. If sprayed on these surfaces, rinse and wipe dry immediately.

V Transportation and Regulatory Data

DOT/IMDG/IATA: Not restricted.

TSCA Status: All components of this product are on the TSCA inventory.

EPA - SARA Title III/CERCLA: This product is regulated under Sections 311/312. This product contains glycol ethers (<5%) which are regulated under Section 313 and Section 304/CERCLA and contains potassium hydroxide (CAS #1310-58-3, <0.3%) which is regulated under Section 304/CERCLA.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Flash Point: >200°F (closed cup)

Fire Extinguishing Agents: Dry chemical, carbon dioxide (CO_2), foam, or water spray.

IX Physical Data

pH	12 - 13
Specific gravity	~1.0
Solubility in water	complete

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DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH

DATE PREPARED 3/05

MILLIKEN & COMPANY

MATERIAL SAFETY DATA SHEET

Material Safety Data Sheet
May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

MSDS No. F-002

IDENTITY *(As Used on Label and List)*

Note: Blank Spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to so indicate.

Styles 155565, 155570 and 155590 (Amplitude)

Section I

Manufacturer's Name
Milliken & Company
Address (Number, Street, City, State, and Zip Code
P.O. Box 1926 (920 Milliken Road)
Spartanburg, SC 29304

Emergency Telephone Number
(864) 503-2779
Telephone Number for Information
(864) 503-2779
Date Prepared / Last Review
May 16, 2012

Section II - Identity Information

Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (Optional)
THPS-Urea Condensate Polymer (CAS # 63502-25-0)	**N/A**	**N/A**		**15 -20 %**
Formaldehyde (CAS # 50-00-0)	**0.75 ppm TWA / 2 ppm STEL***			**< 75 ppm**

* Workplace exposure to formaldehyde is limited in 29 CFR 1910.1048 to these airborne gas concentrations. The materials used to make this fabric have been previously used by Milliken & Company and to our knowledge have been safely used commercially. We are unaware of any excessive airborne formaldehyde concentrations resulting from previous use of these materials and, therefore, do not expect excessive exposure to result from normal use of the final product.

Section III - Physical / Chemical Characteristics

Boiling Point	**N / A**	Specific Gravity (Water = 1)	**N / A**
Vapor Pressure (mm Hg.)	**N / A**	Melting Point	**N / A**
Vapor Density (AIR = 1)	**N / A**	Evaporation Rate (Butyl Acetate = 1)	**N / A**

Solubility in Water
N / A

Appearance and Odor
Woven fabric

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
N / A	**N / A**	**N / A**	**N / A**

Extinguishing Media
Water, carbon dioxide, dry powder

Special Fire Fighting Procedures
Wear self-contained breathing apparatus and full protective equipment

Unusual Fire and Explosion Hazards
None Known

Section V - Reactivity Data

Styles 155565, 155570 and 155590 (Amplitude)

Stability	Unstable		Conditions to Avoid
	Stable	X	**Strong Acids and Alkalines**

Incompatibility (Materials to Avoid) **N / A**

Hazardous Decomposition or Byproducts **Decomposition products may include carbon oxides, nitrogen oxides, hydrocarbons, ammonia, HCN, and phosphorus oxides.**

Hazardous	May occur		Conditions to Avoid
Polymerization	Will not occur	X	**None Known**

Section VI - Health Hazard Data

Routes of Entry:	Inhalation?	Skin?	Ingestion?
	No	**Yes**	**No**

Health Hazards (Acute and Chronic)

None Known

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	**No**	**No**

Signs and Symptoms of Exposure

Prolonged skin contact may result in irritation

Medical Conditions Generally Aggravated by Exposure

None Known

Emergency and First Aid Procedures

N / A

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material Is Released or Spilled

N / A

Waste Disposal Method

Dispose of in accordance with all federal, state, and local regulations

Precautions to Be Taken in Handling and Storing

None Known

Other Precautions

N / A

Section VIII - Control Measures

Respiratory Protection (Specify Type) **N / A**

Ventilation	Local Exhaust **N / A**	Special **N / A**
	Mechanical **N / A**	Other **N / A**

Protective Gloves **As required** Eye Protection **N / A**

Other Protective Clothing or Equipment **N / A**

Work/Hygienic Practices **N / A**

The information contained herein is provided for the purpose of disclosing product hazards and does not constitute product specification. No warranties, either expressed or implied are made regarding this product.

Wave Urinal Deodorizer

Material Safety Data Sheet

Section 1
Chemical Product & Company Information

Emergency Contact: (Spill/Release) (800) 424-9300
Information Number: (419) 531-9741
Manufactured By:
Fresh Products
4010 South Avenue
Toledo, OH 43615
Product Name: **The Wave Urinal Deodorizer**
Product Numbers: RWDS10xx, WDS10xx, WDS100xx
Fragrances: Cotton Blossom, Cucumber Melon, Guava Pineapple, Herbal Mint, Honeysuckle, Mango, Ocean Mist, Spiced Apple, Wintergreen

Section 2
Composition/Information on Ingredients

Fragrance CAS# N/A

Section 3
Hazards Identifications

HMIS Codes:
Health: 1 Flammability: 1 Reactivity: 0
Flash Point: >200F
Flammability Limits: Not Established
LEL: Not Established UEL: Not Established

Section 4
First Aid Measures

Emergency and First Aid Procedures:
Eyes: Flush eyes with water.
Skin: Wash affected area with soap and water

Section 5
Fire Fighting Measures

Extinguishing Media: Water spray, carbon dioxide, dry chemical
Special Fire Fighting Procedures: Full protective equipment, including pressure demand self-contained breathing apparatus and turnout equipment should be worn by fire fighters and others exposed to combustion by products.
Unusual Fire & Explosion Hazards: None known

Section 6
Accidental Release Measures

Steps to be taken in case of material release or spill: Remove sources of ignition and provide ventilation. Pick up screens and return to storage.

Section 7
Handling and Storage

Precautions to be taken in handling and storing: Store away from sources of ignition and provide ventilation.
Other Precautions: Always practice good housekeeping and hygienic measures.

Section 8
Exposure Controls/Personal Protection

Ventilation: Local Exhaust: Use in well ventilated area.
Special: Not Applicable
Mechanical: Not Applicable
Other: Not Applicable
Protective Gloves: None when used as directed
Eye Protection: None
Other Protective Clothing or Equipment: None
Work/Hygienic Practices: Always practice good housekeeping.

Section 9
Physical and Chemical Properties

Boiling Point: Not Determined
Vapor Pressure: Not Determined
Vapor Density (Air=1): >1
Specific Gravity (Water=1): ~0.995
Melting Point: Not Determined
Evaporations Rate: (Butyl Acetate = 1) <1
Solubility in water: Insoluble
Appearance: Colored translucent polymer screen with various fragrances.
VOC Content: <3% by weight

Section 10
Stability and Reactivity

Stability: Stable
Conditions to Avoid: None
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Oxides of carbon when burned.
Hazardous Polymerization: N/A Conditions to Avoid: N/A

Section 11
Toxicological Information

Routes of Entry: Based on fragrance
Inhalation: Yes Skin: Yes Eyes: No Ingestion: Unlikely
Health hazards (acute & chronic): Toxicity is expected to be low.
Eyes: May cause irritation
Skin: May cause irritation
Signs & Symptoms of Exposure:
Eyes and Skin: Irritation, redness
Medical conditions generally aggravated by exposure: None known

Section 12
Ecological Information

Not Established

Section 13
Disposal Considerations

Waste Disposal Method: Dispose only in accordance with applicable federal, state and local laws and regulations.

Section 14
Transport Information

DOT Classifications: Non Hazardous

Section 15
Regulatory Information

None Required

Section 16
Other Information

None Required

October 5, 2010

Safety Data Sheet

Date Issued: 8/18/2017

SECTION 1: IDENTIFICATION OF THE PREPARATION AND THE COMPANY

PRODUCT NAME: Wave 3D

RECOMMENDED USE: Deodorizer

RESTRICTIONS ON USE: For intended use only

ITEM NUMBER:3WDS60CBLBX , 3WDS60CBLCT , 3WDS60CIT , 3WDS60CITBX , 3WDS60CME , 3WDS60CMEWB , 3WDS60GPI , 3WDS60HON , 3WDS60KGR , 3WDS60LAV, 3WDS60MAN , 3WDS60MCL , 3WDS60MIN , 3WDS60OMI , 3WDS60OMIBX , 3WDS60SAP , 3WDS60WIN

MANUFACTURER: Fresh Products, LLC, 30600 Oregon Rd. Perrysburg, Ohio 43551 USA

TELEPHONE: +1-419-531-9741

FAX: +1-419-531-8472

EMERGENCY CONTACT (spill/release): 800-424-9300

Section 2: HAZARDS IDENTIFICATION

General: Contains small amounts of chemicals that are hazardous to health and the environment but in quantities too small to constitute any practical risks to health or the environment.

Classification: **WARNING**

Hazard Phrases:

H302: Harmful if swallowed.

H317: May cause allergic skin reaction.

Acute Toxicity Oral 4

Precautionary Phrases:

P102: Keep out of reach of children.

P264: Wash hands thoroughly after handling.

P280: Wear suitable gloves.

Skin Sensitization 1

P301+310: If swallowed, call physician

P302+P352: If on skin, wash with plenty of water.

P332+P313:If rash occurs, seek medical attention.

P501: Dispose of contents to an approved waste disposal plant.

SECTION 3: INGREDIENT INFORMATION

Chemical Identification**:** Solid plastic slow-release deodorizing preparation in the form of a urinal air freshener/deodorizer. It is made from pigmented thermoplastic infused with a fragrance composition and color to represent the fragrance. For institutional use only.

Form/Shape:Urinal screen weighs approximately 58g.

CAS Number: Not applicable since the product is a preparation.

EINECS/ELINCS #: Not applicable since the product is a preparation.

The product is a complex mixture of substances of which the following have been classified as presenting a health or environmental hazard or as having an occupational exposure limit within the meaning of the Directive 67/548/EEC or 1999/45/EC

Level 9%)	CAS NR	EC NR	Substance
60-80%	24937-78-8	N/A	ETHYLENE-VINYL ACETATE COPOLYMER
20-40%	N/A	N/A	FRAGRANCE
<.1%	N/A	N/A	Bacteria

SECTION 4: FIRST AID MEASURES

General: No specific acute effects or symptoms are known.

Inhalation: No acute effects expected. If person is feeling unwell, remove to fresh air.

Ingestion: Possibility of ingestion limited due to product form and difficulty to chew and ingest. In the event of ingestion, rinse mouth thoroughly with water.

Skin: Wash off with soap and water.

Eyes: Possibility of eye contact limited. In the event, wash thoroughly with water or approved eyewash.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing media appropriate for the surrounding fire. Water spray, fog or mist. Dry chemicals, sand etc.

Exposure Hazards **:** Thermal decomposition or burning may release a variety of products ranging from simple hydrocarbons to toxic/irritating gases including carbon monoxide and carbon dioxide. Full protective clothing should be worn before a confined fire space is entered. Self-contained breathing apparatus should be worn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

No special requirements for accidental release required. Apply good housekeeping practices.

SECTION 7: HANDLING AND STORAGE

Usage Precautions: Follow normal good-housekeeping practices. Keep away from direct flames.

Storage Precautions: Keep in cool, dry conditions in original containers at no more than 30° C

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Occupational Exposure limit: Not Established

Respiratory Protection: None required under normal usage

Protection: Although unexpected, avoid prolonged skin contact. Use chemically resistant gloves as needed.

Eye Protection: None required

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Thermoplastic screen with fragrance oil.

Odor: Various

Odor Threshold: Not determined

Color: Various

pH value: Not determined/applicable

Melting Pt: Estimated 60° C

Boiling Pt: Not applicable.

Flash pt: Not applicable.

Evaporation Rate: Not applicable.

Flammability: Not determined/applicable

UEL: Not determined

LEL: Not determined

Vapor Pressure: Not determined/applicable

Vapor Density: Not determined/applicable

Relative Density: Not determined

Solubility in water: Insoluble.

Partition Coefficient: Not determined

Autoignition Temperature: Not applicable

Decomposition Temperature:

Not determined/applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Normally stable.

Materials to avoid: Strong oxidizing agents.

Conditions to avoid: Avoid extreme heat and naked flames.

Decomposition Products: None under normal storage conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Effects: Ingredients include a small quantity of volatile fragrance chemicals which may contain small amounts of substances that are harmful if swallowed and/or irritating to the eyes and skin.

Chronic Effects: None are known.

Health Risks: INHALATION: Prolonged exposure to volatile ingredients is unlikely to cause irritation or other adverse health effects.

INGESTION: No practical risk of adverse health effects.

SKIN CONTACT: No practical risk of adverse health effects.

EYE CONTACT: No practical risk of adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION

No specific information has been established regarding the product. However according to the conventional method of Directive 99/45/EC the product is classified as harmful to aquatic organisms, or causing long-term effects in the aquatic environment.

Ecotoxicity: N/A

Bioaccumulative Potential: N/A

Other Adverse Effects: N/A

Persistence and Degradability: N/A

Mobility in Soil: N/A

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local Authority requirements e.g., for used product, as household waste

SECTION 14: TRANSPORT INFORMATION

Product is not regulated as hazardous

Transport Hazard Class: N/A

DOT Classifications: Non Hazardous

UN-Number: N/A

Packing group: N/A

UN Proper Shipping Name: N/A

Marine Pollutant: N/A

Special Precautions with Transport: N/A

SECTION 15: REGULATORY INFORMATION

Classification, Packaging and Labeling according to Directive 99/45/EC

Signal word: WARNING

Pictograms: Exclamation mark

Hazard Phrases:

H302: Harmful if swallowed.

H317: May cause allergic skin reaction.

Precautionary Phrases:

P102: Keep out of reach of children.

P264: Wash hands thoroughly after handling.

P280: Wear suitable gloves.

P301+310: If swallowed, call physician

P302+P352: If on skin, wash with plenty of water.

P332+P313:If rash occurs, seek medical attention.

P501: Dispose of contents to an approved waste disposal plant.

SECTION 16: OTHER INFORMATION

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Safety Data Sheet

Date Issued: 11/11/2016

SECTION 1: IDENTIFICATION OF THE PREPARATION AND THE COMPANY

PRODUCT NAME: Parazyme

RECOMMENDED USE: Deodorizer

RESTRICTIONS ON USE: For intended use only

ITEM NUMBER:FRSPP123S

MANUFACTURER: Fresh Products, LLC, 4010 South Ave, Toledo, Ohio 43615 USA

TELEPHONE: +1-419-531-9741

FAX: +1-419-531-8472

EMERGENCY CONTACT (spill/release): 800-424-9300

Section 2: HAZARDS IDENTIFICATION

General: Contains small amounts of chemicals that are hazardous to health and the environment but in quantities too small to constitute any practical risks to health or the environment.

Classification:

WARNING

Acute Toxicity Oral 4

Acute Toxicity Dermal 4

Eye Damage/Irritation 2A

Carcinogenicity 2

Hazard Phrases:

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H319: Causes serious eye irritation.

H351: Suspected of causing cancer.

Precautionary Phrases:

P102: Keep out of reach of children

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P302+ P352: If on skin, wash with plenty of water.

P312: Call a poison center or doctor/physician if you feel unwell.

P280: Wear protective gloves/protective clothing/eye protection/ face protection.

P301+P312: If swallowed: Call a poison center or doctor/physician if you feel unwell.

P305+P351+P338:If in eyes: Rinse cautiously with water for several minutes Remove contact lenses, if present and easy to do. Continue rinsing

P308+P313: If exposed or concerned get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/ attention.

P362: Take off contaminated clothing and wash before reuse.

P405: Store locked up

P501: Dispose of contents to an approved waste disposal plant.

SECTION 3: INGREDIENT INFORMATION

Chemical Identification**:** Crystalline Solid

Form/Shape: Para urinal block comes in various shapes and sizes

CAS Number: Not applicable since the product is a preparation.

EINECS/ELINCS #: Not applicable since the product is a preparation.

The product is a complex mixture of substances of which the following have been classified as presenting a health or environmental hazard or as having an occupational exposure limit within the meaning of the Directive 67/548/EEC or 1999/45/EC

Level 9%)	CAS NR	EC NR	Substance
99%	106-46-7	203-400-5	p-Dichlorobenzene

SECTION 4: FIRST AID MEASURES

General: No specific acute effects or symptoms are known. Inhalation: No acute effects expected. If person is feeling unwell, remove to fresh air. Ingestion: Possibility of ingestion limited due to product form and difficulty to chew and ingest. In the event of ingestion, rinse mouth thoroughly with water. Skin: Wash off with soap and water. Eyes: Possibility of eye contact limited. In the event, wash thoroughly with water or approved eyewash.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing media appropriate for the surrounding fire. Water spray, fog or mist. Dry chemicals, sand etc.

Exposure Hazards **:** Thermal decomposition or burning may release a variety of products ranging from simple hydrocarbons to toxic/irritating gases including carbon monoxide and carbon dioxide. Full protective clothing should be worn before a confined fire space is entered. Self-contained breathing apparatus should be worn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

No special requirements for accidental release required. Apply good housekeeping practices.

SECTION 7: HANDLING AND STORAGE

Usage Precautions: Follow normal good-housekeeping practices. Keep away from direct flames. Storage Precautions: Keep in cool, dry conditions in original containers at no more than 30° C

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Occupational Exposure limit: Not Established

Protection: Although unexpected, avoid prolonged skin contact. Use chemically resistant gloves as needed.

Respiratory Protection: None required under normal usage

Eye Protection: None required

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Crystalline solid

Odor: Characteristic

Odor Threshold: Not determined

Color: Various

pH value: Not determined/applicable

Melting Pt: Estimated 60° C

Boiling Pt: Not applicable.

Flash pt: Not applicable.

Evaporation Rate: Not applicable.

Flammability: Not determined/applicable

UEL: Not determined

LEL: Not determined

Vapor Pressure: Not determined/applicable

Vapor Density: Not determined/applicable

Relative Density: Not determined

Solubility in water: Insoluble.

Partition Coefficient: Not determined

Autiignition Temperature: Not applicable

Decomposition Temperature:

Not determined/applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Normally stable.

Conditions to avoid: Avoid extreme heat and naked flames.

Materials to avoid: Strong oxidizing agents.

Decomposition Products: None under normal storage conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Effects: Ingredients include a small quantity of volatile fragrance chemicals which may contain small amounts of substances that are harmful if swallowed and/or irritating to the eyes and skin.

Chronic Effects: None are known.

SKIN CONTACT: No practical risk of adverse health effects.

Health Risks: EYE CONTACT: No practical risk of adverse health effects.

INGESTION: No practical risk of adverse health effects.

INHALATION: Prolonged exposure to volatile ingredients is unlikely to cause irritation or other adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION

No specific information has been established regarding the product. However according to the conventional method of Directive 99/45/EC the product is classified as harmful to aquatic organisms, or causing long-term effects in the aquatic environment.

Ecotoxicity: N/A Persistence and Degradability: N/A Bioaccumulative Potential: N/A Mobility in Soil: N/A Other Adverse Effects: N/A

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local Authority requirements e.g., for used product, as household waste

SECTION 14: TRANSPORT INFORMATION

Product is not regulated as hazardous

Transport Hazard Class: N/A

DOT Classifications: Non Hazardous

UN-Number: N/A

Packing group: N/A

UN Proper Shipping Name: N/A

Marine Pollutant: N/A

Special Precautions with Transport: N/A

SECTION 15: REGULATORY INFORMATION

Classification, Packaging and Labeling according to Directive 99/45/EC

Signal word: WARNING

Pictograms: Exclamation mark

Health Hazard

Hazard Phrases:

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H319: Causes serious eye irritation.

H351: Suspected of causing cancer.

Precautionary Phrases:

P102: Keep out of reach of children

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P302+ P352: If on skin, wash with plenty of water.

P312: Call a poison center or doctor/physician if you feel unwell.

P280: Wear protective gloves/protective clothing/eye protection/ face protection.

P301+P312: If swallowed: Call a poison center or doctor/physician if you feel unwell.

P305+P351+P338:If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P308+P313: If exposed or concerned get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/ attention.

P362: Take off contaminated clothing and wash before reuse.

P405: Store locked up

P501: Dispose of contents to an approved waste disposal plant.

SECTION 16: OTHER INFORMATION

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Material Safety Data Sheet

MSDS ID NO.: 0279MAR019
Revision date: 12/07/2010

Product name: Marathon No. 2 Low Sulfur Diesel Dyed 500 ppm Sulfur Max
Synonym: Diesel No. 2 Dyed 500 ppm Sulfur Max; No. 2 Diesel, Non-Road Use, Dyed; No. 2 Diesel Dyed 500 ppm Sulfur Max; No. 2 NR 500 Diesel Dyed; No. 2 Diesel Dyed (0.05% Sulfur Max)
Chemical Family: Petroleum Hydrocarbon
Formula: Mixture

Manufacturer:
Marathon Petroleum Company LP
539 South Main Street
Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

No. 2 Diesel is a complex mixture of paraffins, cycloparaffins, olefins, and aromatic hydrocarbons having hydrocarbon chain lengths predominately in the range of C11 through C20. May contain a trace amount of benzene (<0.01%). Can contain small amounts of red dye and additives (<0.15%) which are not considered hazardous at the concentrations used.

Product information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Marathon No. 2 Diesel	68476-30-2	100	Skin - potential significant contribution to overall exposure by the cutaneous route 100 mg/m³ TWA		

Component Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Saturated Hydrocarbons	Mixture	54-85			
Aromatic Hydrocarbons	Mixture	15-45			
Unsaturated Hydrocarbons	Mixture	1-6			
Naphthalene	91-20-3	0.01-0.5	Skin - potential significant contribution to overall exposure by the cutaneous route 10 ppm TWA 15 ppm STEL	= 10 ppm TWA = 50 mg/m³ TWA = 15 ppm STEL = 75 mg/m³ STEL	

Notes: The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

EMERGENCY OVERVIEW

CAUTION!

VAPORS, FUMES, OR MISTS MAY CAUSE RESPIRATORY TRACT IRRITATION
MAY BE HARMFUL OR FATAL IF SWALLOWED
MAY CAUSE LUNG DAMAGE
OVEREXPOSURE MAY CAUSE CNS DEPRESSION
SEE TOXICOLOGICAL INFORMATION SECTION FOR MORE INFORMATION

COMBUSTIBLE LIQUID AND VAPOR
VAPOR MAY CAUSE FLASH FIRE

STABLE

Inhalation:

Exposure to high vapor concentrations may produce headache, giddiness, vertigo, and anesthetic stupor.

Ingestion:

Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonitis, pulmonary edema/hemorrhage and even death.

Skin contact:

Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.

Eye contact:

Produces little or no irritation on direct contact with the eye.

Carcinogenic Evaluation:

Product information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Marathon No. 2 Diesel 68476-30-2	NE			

Notes:

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A).

IARC has determined that there is sufficient evidence for the carcinogenicity in experimental animals of diesel engine exhaust and extracts of diesel engine exhaust particles. IARC determined that there is only limited evidence for the carcinogenicity in humans of diesel engine exhaust. However, IARC's overall evaluation has resulted in the IARC designation of diesel engine exhaust as probably carcinogenic to humans (Group 2A) because of the presence of certain engine exhaust components.

Component Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Naphthalene 91-20-3	Monograph 82 [2002]	Reasonably Anticipated To Be A Human Carcinogen male rat-clear evidence; female rat-clear evidence; male mice-no evidence; female mice-some evidence	A4 - Not Classifiable as a Human Carcinogen	Present

Notes: The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene is a possible human carcinogen.

Eye Contact:

Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Skin Contact:

Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

Ingestion:

If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.

Inhalation:

If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

NOTES TO PHYSICIAN:

INGESTION: If ingested this material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

Medical Conditions Aggravated By Exposure:

Pre-existing skin conditions and respiratory disorders may be aggravated by exposures to components of this product.

Suitable extinguishing media:

For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards:

This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Special protective equipment for firefighters:	Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.
Flash point:	130-190 F
Autoignition temperature:	637 F
Flammable limits in air - lower (%):	0.7
Flammable limits in air - upper (%):	5.0

NFPA rating:
Health: 1
Flammability: 2
Instability: 1
Other: -

Personal precautions:	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

Handling:
Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues.

Avoid repeated and prolonged skin contact. Never siphon this product by mouth. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures:	Local or general exhaust required when using at elevated temperatures that generate vapors or mists.
Respiratory protection:	Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for fire fighting.
Skin and body protection:	Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.

Eye protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.

Hygiene measures: No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

Appearance:	Red Liquid
Physical state (Solid/Liquid/Gas):	Liquid
Substance type (Pure/Mixture):	Mixture
Color:	Red
Odor:	Slight Hydrocarbon
Molecular weight:	180
pH:	Neutral
Boiling point/range (5-95%):	400-640 F
Melting point/range:	Not determined.
Decomposition temperature:	Not applicable.
Specific gravity:	C.A. 0.8
Density:	6.76 lbs/gal
Bulk density:	No data available.
Vapor density:	4-5
Vapor pressure:	1-10 mm Hg @ 100 F
Evaporation rate:	No data available.
Solubility:	Negligible
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	No data available.
VOC content(%):	10%
Viscosity:	1.9-3.4 @ 40 C

Stability: The material is stable at 70 F, 760 mm pressure.

Polymerization: Will not occur.

Hazardous decomposition products: Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

Materials to avoid: Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.

Conditions to avoid: Excessive heat, sources of ignition and open flames.

Acute toxicity:

Product information:

Name	CAS Number	Inhalation:	Dermal:	Oral:
Marathon No. 2 Diesel	68476-30-2	No data available	No data available	No data available

Toxicology Information:

MIDDLE DISTILLATES, PETROLEUM: Long-term repeated (lifetime) skin exposure to similar materials has been reported to result in an increase in skin tumors in laboratory rodents. The relevance of these findings to humans is not clear at this time.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

DIESEL EXHAUST: Chronic inhalation studies of whole diesel engine exhaust in mice and rats produced a significant increase in lung tumors. Combustion of kerosine and/or diesel fuels produces gases and particulates which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur and hydrocarbons. Significant exposure to carbon monoxide vapors decreases the oxygen carrying capacity of the blood and may cause tissue hypoxia via formation of carboxyhemoglobin.

Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffers Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

TARGET ORGANS: central nervous system, skin, lungs, respiratory system, kidney, liver.

Mobility:

May partition into air, soil and water.

Ecotoxicity:

Toxic to aquatic organisms.

Bioaccummulation:

Not expected to bioaccumulate in aquatic organisms.

Persistance/Biodegradation:

Not likely to bioaccumulate in aquatic organisms.

Cleanup Considerations:

This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of an "characteristic" hazardous waste. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

49 CFR 172.101:

DOT:

Transport Information:	This material when transported via US commerce would be regulated by DOT Regulations.
Proper shipping name:	Fuel Oil, No. 2
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III
DOT reportable quantity (lbs):	Not applicable.

Proper shipping name:	Fuel Oil, No. 2
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	NA

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	= 100 lb final RQ = 45.4 kg final RQ

SARA Section 311/312 The following EPA hazard categories apply to this product:

Acute Health Hazard
Fire Hazard
Chronic Health Hazard

SARA Section 313: This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Saturated Hydrocarbons	None
Aromatic Hydrocarbons	None
Unsaturated Hydrocarbons	None
Naphthalene	= 0.1 % de minimis concentration

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Saturated Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Aromatic Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.

Saturated Hydrocarbons

Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Unsaturated Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Naphthalene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	sn 1322
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen

Saturated Hydrocarbons

New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ land/water = 100 lb RQ air

Canadian Regulatory Information:

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Naphthalene	B4, D2A	1 %

NOTE: Not Applicable.

Additional Information: No data available.

Prepared by: Mark S. Swanson, Manager, Toxicology and Product Safety

The information and recommendations contained herein are based upon tests believed to be reliable. However, Marathon Petroleum Company LP (MPC) does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. MPC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

End of Safety Data Sheet

Corporation

P. O. BOX 22 • LAKELAND • FLORIDA • 33802-0022
Phone (863) 665-7557 • WATS (800) 282-5678 • Fax (863) 666-2851

FAX TRANSMITTAL

Date: 4-22-13

Number of pages including cover sheet: 41

To: Sandy Brown
WREC

From: Debbie

Extension # _____

Phone: _____

Fax #: 352-567-3343

CC: _____

Remarks: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

EMERGENCY OVERVIEW

CAUTION!

VAPORS, FUMES, OR MISTS MAY CAUSE RESPIRATORY TRACT IRRITATION
MAY BE HARMFUL OR FATAL IF SWALLOWED
MAY CAUSE LUNG DAMAGE
OVEREXPOSURE MAY CAUSE CNS DEPRESSION
SEE TOXICOLOGICAL INFORMATION SECTION FOR MORE INFORMATION

COMBUSTIBLE LIQUID AND VAPOR
VAPOR MAY CAUSE FLASH FIRE

STABLE

Inhalation:

Exposure to high vapor concentrations may produce headache, giddiness, vertigo, and anesthetic stupor.

Ingestion:

Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonitis, pulmonary edema/hemorrhage and even death.

Skin contact:

Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.

Eye contact:

Produces little or no irritation on direct contact with the eye.

Carcinogenic Evaluation:

Product Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Marathon No. 2 Ultra Low Sulfur Diesel 68476-30-2	NE			

Notes:

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A).

IARC has determined that there is sufficient evidence for the carcinogenicity in experimental animals of diesel engine exhaust and extracts of diesel engine exhaust particles. IARC determined that there is only limited evidence for the carcinogenicity in humans of diesel engine exhaust. However, IARC's overall evaluation has resulted in the IARC designation of diesel engine exhaust as probably carcinogenic to humans (Group 2A) because of the presence of certain engine exhaust components.

Component Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Naphthalene 91-20-3	Monograph 82 [2002]	Reasonably Anticipated To Be A Human Carcinogen male rat-clear evidence; female rat-clear evidence; male mice-no evidence; female mice-some evidence	A4 - Not Classifiable as a Human Carcinogen	Present

Notes: The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene is a possible human carcinogen.

Eye Contact:

Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Skin Contact:

Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

Ingestion:

If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.

Inhalation:

If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

NOTES TO PHYSICIAN:

INGESTION: If ingested this material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

Medical Conditions Aggravated By Exposure:

Pre-existing skin conditions and respiratory disorders may be aggravated by exposures to components of this product.

Suitable extinguishing media:

For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards:

This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Special protective equipment for firefighters:	Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.
Flash point:	120-190 F
Autoignition temperature:	489 F
Flammable limits in air - lower (%):	0.7
Flammable limits in air - upper (%):	5.0

NFPA rating:
Health: 1
Flammability: 2
Instability: 0
Other: -

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

Handling:
Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues.

Avoid repeated and prolonged skin contact. Never siphon this product by mouth. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures:	Local or general exhaust required when using at elevated temperatures that generate vapors or mists.
Respiratory protection:	Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for fire fighting.
Skin and body protection:	Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.

Eye protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.

Hygiene measures: No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

Appearance:	Red Liquid
Physical state (Solid/Liquid/Gas):	Liquid
Substance type (Pure/Mixture):	Mixture
Color:	Red
Odor:	Not applicable.
Molecular weight:	180
pH:	Neutral
Boiling point/range (5-95%):	360-550 F
Melting point/range:	Not determined.
Decomposition temperature:	Not applicable.
Specific gravity:	C.A. 0.8
Density:	6.76 lbs/gal
Bulk density:	No data available.
Vapor density:	4-5
Vapor pressure:	1-10 mm Hg @ 100 F
Evaporation rate:	No data available.
Solubility:	Negligible
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	No data available.
VOC content(%):	10%
Viscosity:	1.3-2.1 @ 50 C

Stability: The material is stable at 70 F, 760 mm pressure.

Polymerization: Will not occur.

Hazardous decomposition products: Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

Materials to avoid: Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.

Conditions to avoid: Excessive heat, sources of ignition and open flames.

Acute toxicity:

Product Information:

Name	CAS Number	Inhalation:	Dermal:	Oral:
Marathon No. 2 Ultra Low Sulfur Diesel	68476-30-2	No data available	No data available	No data available

Toxicology Information:

MIDDLE DISTILLATES, PETROLEUM: Long-term repeated (lifetime) skin exposure to similar materials has been reported to result in an increase in skin tumors in laboratory rodents. The relevance of these findings to humans is not clear at this time.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

DIESEL EXHAUST: Chronic inhalation studies of whole diesel engine exhaust in mice and rats produced a significant increase in lung tumors. Combustion of kerosine and/or diesel fuels produces gases and particulates which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur and hydrocarbons. Significant exposure to carbon monoxide vapors decreases the oxygen carrying capacity of the blood and may cause tissue hypoxia via formation of carboxyhemoglobin.

Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffers Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

TARGET ORGANS: central nervous system, skin, respiratory system, lungs, kidney, liver,

[redacted]

Mobility:

May partition into air, soil and water.

Ecotoxicity:

Toxic to aquatic organisms.

Bioaccummulation:

Not expected to bioaccumulate in aquatic organisms.

Persistance/Biodegradation:

Readily biodegradable in the environment.

Cleanup Considerations:

This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of an "characteristic" hazardous waste. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

49 CFR 172.101:

DOT:

Transport Information: This material when transported via US commerce would be regulated by DOT Regulations.

Proper shipping name:	Fuel Oil, No. 2
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III
DOT reportable quantity (lbs):	Not applicable.

Proper shipping name:	Fuel Oil, No. 2
UN/Identification No:	NA 1993
Hazard Class:	3
Packing group:	III

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	NA

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	= 100 lb final RQ = 45.4 kg final RQ

SARA Section 311/312 The following EPA hazard categories apply to this product:

Acute Health Hazard
Fire Hazard
Chronic Health Hazard

SARA Section 313: This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Saturated Hydrocarbons	None
Aromatic Hydrocarbons	None
Unsaturated Hydrocarbons	None
Naphthalene	= 0.1 % de minimis concentration

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Saturated Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Aromatic Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.

Saturated Hydrocarbons	
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Unsaturated Hydrocarbons	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Naphthalene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	sn 1322
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen

Saturated Hydrocarbons

New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ land/water = 100 lb RQ air

Canadian Regulatory Information:

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Naphthalene	B4, D2A	1 %

NOTE: Not Applicable.

Additional Information: No data available.

Prepared by: Mark S. Swanson, Manager, Toxicology and Product Safety

The information and recommendations contained herein are based upon tests believed to be reliable. However, Marathon Petroleum Company LP (MPC) does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. MPC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

End of Safety Data Sheet

FLEETWING Corporation

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FAX TRANSMITTAL

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WREC

From: Debbie

Extension # _____

Phone: _____

Fax #: 352-567-3343

CC: _____

Remarks: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

Material Safety Data Sheet

MSDS ID NO.: 0130MAR019
Revision date: 12/07/2010

Product name: Marathon Regular Unleaded Gasoline With Ethanol
Synonym: Regular Unleaded Gasoline With Alcohol
Chemical Family: Petroleum Hydrocarbon
Formula: Mixture

Manufacturer:
Marathon Petroleum Company LP
539 South Main Street
Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

Gasoline is a complex combination of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons having carbon numbers predominantly greater than C3 and boiling in the range of 85-500 F. Can contain small amounts of dye and other additives (>0.02%) which are not considered hazardous at the concentrations used.

Product Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Marathon Regular Unleaded Gasoline With Ethanol	86290-81-5	100	300 ppm TWA 500 ppm STEL		

Component Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Saturated Hydrocarbons	Mixture	50-77			

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Aromatic Hydrocarbons	Mixture	9-36			
Toluene	108-88-3	0.9-13.5	20 ppm TWA	= 100 ppm TWA = 375 mg/m³ TWA = 150 ppm STEL = 560 mg/m³ STEL	
Unsaturated Hydrocarbons	Mixture	0.9-13.6			
Ethyl Alcohol	64-17-5	5.7-10	1000 ppm STEL	=1000 ppm TWA 1900 mg/m³ TWA	
Xylene	1330-20-7	1.8-9.0	100 ppm TWA 150 ppm STEL	= 100 ppm TWA = 435 mg/m³ TWA = 150 ppm STEL = 655 mg/m³ STEL	
1,2,4-Trimethylbenzene	95-63-6	0.9-4.5	= 25 ppm TWA	= 125 mg/m³ TWA = 25 ppm TWA	
Benzene	71-43-2	0.45-3.2	Skin - potential significant contribution to overall exposure by the cutaneous route 0.5 ppm TWA 2.5 ppm STEL	= 25 ppm Ceiling = 10 ppm TWA = 50 ppm STEL	OSHA Exposure Limit as specified in 1910.1028: =1.0 ppm TWA = 5 ppm STEL = 0.5 ppm Action Level
Hexane	110-54-3	0-2.7	Skin - potential significant contribution to overall exposure by the cutaneous route 50 ppm TWA	= 180 mg/m³ TWA = 50 ppm TWA	
Ethyl Benzene	100-41-4	0.45-1.8	100 ppm TWA 125 ppm STEL	= 100 ppm TWA = 435 mg/m³ TWA = 125 ppm STEL = 545 mg/m³ STEL	
Naphthalene	91-20-3	0.1-0.5	Skin - potential significant contribution to overall exposure by the cutaneous route 10 ppm TWA 15 ppm STEL	= 10 ppm TWA = 50 mg/m³ TWA = 15 ppm STEL = 75 mg/m³ STEL	

Notes: The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

EMERGENCY OVERVIEW

DANGER!

FUMES MAY CAUSE EYE AND RESPIRATORY IRRITATION.
MAY BE HARMFUL OR FATAL IF SWALLOWED
MAY CAUSE LUNG DAMAGE
OVEREXPOSURE MAY CAUSE CNS DEPRESSION
BREATHING HIGH CONCENTRATIONS CAN CAUSE IRREGULAR HEARTBEATS WHICH MAY BE FATAL

DANGER - CONTAINS BENZENE - MAY CAUSE CANCER
CAN CAUSE LEUKEMIA AND OTHER BLOOD DISORDERS.
POTENTIAL REPRODUCTIVE HAZARD
SEE TOXICOLOGICAL INFORMATION SECTION FOR MORE INFORMATION

EXTREMELY FLAMMABLE LIQUID AND VAPOR
VAPOR MAY CAUSE FLASH FIRE OR EXPLOSION
MATERIAL MAY ACCUMULATE STATIC CHARGE

STABLE

Inhalation:

Breathing high concentrations may be harmful.
May cause central nervous system depression or effects. Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure.
Breathing high concentrations of this material, for example, in a confined space or by intentional abuse, can cause irregular heartbeats which can cause death. See Toxicological Effects (Section 11) for more information.

Ingestion:

Swallowing this material may be harmful.
May cause irritation of the mouth, throat and gastrointestinal tract.
May cause central nervous system depression or effects. Symptoms may include salivation, pain, nausea, vomiting and diarrhea. Exposure may also cause central nervous system symptoms similar to those listed under "Inhalation" (see Inhalation section).

Skin contact:

Contact may cause reddening, itching and inflammation.
Skin contact may cause harmful effects in other parts of the body.

Eye contact:

Contact may cause pain and severe reddening and inflammation of the conjunctiva.
Effects may become more serious with repeated or prolonged contact.

Carcinogenic Evaluation:

Product Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Marathon Regular Unleaded Gasoline With Ethanol 86290-81-5	A2- Possible Human Carcinogen		A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	

Notes:

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of gasoline in humans. IARC determined that limited evidence of carcinogenicity in animals exists. IARC's overall evaluation of gasoline, in spite of limited carcinogenicity evidence, has resulted in the IARC designation of gasoline as possibly carcinogenic to humans (Group 2B) because gasoline contains benzene.

IARC has determined that there is inadequate evidence for the carcinogenicity of gasoline engine exhaust in humans or animals. However, IARC's overall evaluation on gasoline engine exhaust, in spite of the absence of carcinogenicity data, has resulted in the IARC designation of gasoline engine exhaust as possibly carcinogenic to humans (Group 2B) because of the presence of certain engine exhaust components.

Component Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Toluene 108-88-3		male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence	A4 - Not Classifiable as a Human Carcinogen	
Ethyl Alcohol 64-17-5	A3-Possible Human Carcinogen	male rats-inadequate; female mice-inadequate	A4 - Not Classifiable as a Human Carcinogen	Present
Xylene 1330-20-7		male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence	A4 - Not Classifiable as a Human Carcinogen	
Benzene 71-43-2	Supplement 7 [1987], Monograph 29 [1982]	Known Human Carcinogen male rat-clear evidence; female rat-clear evidence; male mice-clear evidence; female mice-clear evidence	A1 - Confirmed Human Carcinogen	Present
Ethyl Benzene 100-41-4	Monograph 77 [2000]	male rat-clear evidence; female rat-some evidence; male mice-some evidence; female mice-some evidence	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	Present
Naphthalene 91-20-3	Monograph 82 [2002]	Reasonably Anticipated To Be A Human Carcinogen male rat-clear evidence; female rat-clear evidence; male mice-no evidence; female mice-some evidence	A4 - Not Classifiable as a Human Carcinogen	Present

Notes:

The International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), and OSHA have determined that there is sufficient evidence for the carcinogenicity of benzene in humans (Group 1A).

The International Agency for Reasearch on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of alcoholic beverages (ethanol) in humans (Group 1).

The International Agency for Research on Cancer (IARC) has concluded that ethyl benzene is possibly carcinogenic to humans (Group 2B).

The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene is a possible human carcinogen.

Eye Contact:

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. GET IMMEDIATE MEDICAL ATTENTION.

Skin Contact:

Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation persists. Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties.

Ingestion:

Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Inhalation:

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

NOTES TO PHYSICIAN:

INHALATION: This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

INGESTION: If ingested this material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

Medical Conditions Aggravated By Exposure:

blood (anemia), bone marrow, blood-forming organs, skin, respiratory system, lungs, liver, kidney,

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards:	This product has been determined to be a flammable liquid per the OSHA Hazard Communication Standard, and should be handled accordingly. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.
Special protective equipment for firefighters:	Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.
Flash point:	-50 F
Autoignition temperature:	C.A. 495 F
Flammable limits in air - lower (%):	1.4
Flammable limits in air - upper (%):	7.6

NFPA rating:
Health: 1
Flammability: 3
Instability: 0
Other: -

Personal precautions:	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

Handling:

Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Avoid skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

For use as a motor fuel only. Product should never be used as a solvent due to its flammable and potentially toxic properties. Siphoning by mouth can result in lung aspiration which can be harmful or fatal.

Portable containers of 12 gallons (45 liters) or less should never be filled while they are in or on a motor vehicle or marine craft. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. Containers should be placed on the ground. The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers. A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling. Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures:	Local or general exhaust required in an enclosed area or when there is inadequate ventilation.
Respiratory protection:	Approved organic vapor chemical cartridge or supplied air respirators should be worn for exposures to any components exceeding the TWA or STEL. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for fire fighting.
Skin and body protection:	Use nitrile rubber, viton or PVA gloves for repeated or prolonged skin exposure.
Eye protection:	No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.
Hygiene measures:	No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

Appearance:	Clear Or Colored Liquid
Physical state (Solid/Liquid/Gas):	Liquid
Substance type (Pure/Mixture):	Mixture
Color:	Clear or Colored
Odor:	Strong Hydrocarbon
Molecular weight:	100
pH:	Neutral
Boiling point/range (5-95%):	90-437 F
Melting point/range:	No disponable.
Decomposition temperature:	Not applicable.

Specific gravity:	0.70-0.77
Density:	5.9-6.3 lbs/gal
Bulk density:	No data available.
Vapor density:	3-4
Vapor pressure:	403-776 mm Hg @ 100 F
Evaporation rate:	No data available.
Solubility:	Negligible
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	2.13-4.5
VOC content(%):	100%
Viscosity:	No data available.

Stability:	The material is stable at 70 F, 760 mm pressure.
Polymerization:	Will not occur.
Hazardous decomposition products:	Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.
Materials to avoid:	Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.
Conditions to avoid:	Excessive heat, sources of ignition, open flame

Acute toxicity:

Product information:

Name	CAS Number	Inhalation:	Dermal:	Oral:
Marathon Regular Unleaded Gasoline With Ethanol	86290-81-5	>10,000 ppm [Dog]	>5 ml/kg [Rabbit]	>14 ml/kg [Rat]

Toxicology information:

BENZENE: Studies of Workers Overexposed to Benzene: Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer and other diseases of the blood forming organs including Acute Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a Case-Control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC.
The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma.

NAPHTHAS: In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30-year latency period.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

TOLUENE: Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Abuse of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system, and can cause CNS depression, cardiac arrhythmias, and death. Studies of workers indicate longterm exposure may be related to impaired color vision and hearing. Some studies of workers suggest longterm exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest longterm exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals have been largely negative. Positive findings include small increases in minor

skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposure may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Adverse effects on the liver, kidney, thymus and nervous system were observed in animal studies following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

ETHYLBENZENE: Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). The incidence of tumors was also elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals have demonstrated evidence of ototoxicity (hearing loss) following exposure levels as low as 300 ppm for 5 days. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

XYLENES, ALL ISOMERS: Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, CNS damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross overexposure. Effects from Prolonged or Repeated Exposure: Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure. The relevance of these observations to humans is not clear at this time. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

C9 AROMATIC HYDROCARBONS: A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to

naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

N-HEXANE: Long-term or repeated exposure to n-hexane can cause peripheral nerve damage. Initial symptoms are numbness of the fingers and toes. Also, motor weakness can occur in the digits, but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. Testicular atrophy and partial to full loss of the germ cell line were observed in sub-chronic high-dose inhalation studies of laboratory rodents. These effects appeared irreversible. Rodent reproduction studies have shown evidence of reduced fetal weight but no frank malformations.

PENTANES: Studies of pentane isomers in laboratory animals indicate exposure to extremely high levels (roughly 10 vol.%) may induce cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

ETHANOL: Repeated ingestion of ethanol can result in alcohol abuse, causing behavioral changes, memory loss, impaired judgement, decreased appetite, irregular heartbeats, and decreased fertility. Prolonged and repeated ingestion of ethanol has also been associated with cancers of the mouth, pharynx, esophagus and liver. Ethanol ingestion by pregnant women can cause miscarriage, low birth weight, premature birth and fetal alcohol syndrome. In males, acute and chronic alcohol ingestion may affect gonadal hormone levels. It may also affect the liver, kidney, brain, blood and cardiovascular system.

CARBON MONOXIDE: is a chemical asphyxiant with no warning properties (such as odor). At 400-500 ppm for 1 hour headache and dyspnea may occur. If activity is increased, symptoms of overexposure may include nausea, irritability, increased respiration, tinnitus, sweating, chest pain, confusion, impaired judgement, dizziness, weakness, drowsiness, ataxia, irregular heart beat, cyanosis and pallor. Levels in excess of 1000 ppm can result in collapse, loss of conciousness, respiratory failure and death. Extremely high concentrations (12,800 ppm) can cause immediate unconsciousness and death in 1-3 minutes. Repeated anoxia can lead to central nervous system damage and peripheral neuropathy, with loss of sensation in the fingers, amnesia, and mental deterioration and possible congestive heart failure. Damage may also occur to the fetus, lung, liver, kidney, spleen, cardiovascular system and other organs.

COMBUSTION ENGINE EXHAUST: Chronic inhalation studies of gasoline engine exhaust in mice, rats and hamsters did not produce any carcinogenic effects. Condensates/extracts of gasoline engine exhaust produced an increase in tumors compared to controls when testing by skin painting, subcutaneous injection, intratracheal instillation or implantation into the lungs.

Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffers Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

TARGET ORGANS: central nervous system, brain, peripheral nervous system, auditory system, respiratory system, mucous membranes, lungs, skin, eyes, cardiovascular system, heart, blood blood-forming organs, bone marrow, reproductive organs, testes, immune system, lymphatics, thymus, thyroid, pituitary gland.

12. ECOLOGICAL INFORMATION

Mobility:

May partition into air, soil and water.

Ecotoxicity:

Toxic to aquatic organisms.

Bioaccummulation:

Not expected to bioaccumulate in aquatic organisms.

Persistance/Biodegradation:

Readily biodegradable in the environment. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater, resulting in elongated plumes of these constituents.

13. DISPOSAL CONSIDERATIONS

Cleanup Considerations: This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of an "characteristic" hazardous waste. This product could also contain benzene at >0.5 ppm and could exhibit the characteristics of "toxicity" as determined by the toxicity characteristic leaching procedure (TCLP). This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

14. TRANSPORT INFORMATION

49 CFR 172.101:

DOT:

Transport Information: This material when transported via US commerce would be regulated by DOT Regulations.

Proper shipping name:	Gasoline
UN/Identification No:	UN 1203
Hazard Class:	3
Packing group:	II
DOT reportable quantity (lbs):	Not applicable.

Proper shipping name: Gasoline

UN/Identification No:	UN 1203
Hazard Class:	3
Packing group:	II

[redacted]

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Toluene	NA
Unsaturated Hydrocarbons	NA
Ethyl Alcohol	NA
Xylene	NA
1,2,4-Trimethylbenzene	NA
Benzene	NA
Hexane	NA
Ethyl Benzene	NA
Naphthalene	NA

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Toluene	= 454 kg final RQ
Unsaturated Hydrocarbons	NA
Ethyl Alcohol	NA
Xylene	= 100 lb final RQ = 45.4 kg final RQ
1,2,4-Trimethylbenzene	NA
Benzene	= 10 lb final RQ = 4.54 kg final RQ
Hexane	= 2270 kg final RQ = 5000 lb final RQ
Ethyl Benzene	= 1000 lb final RQ = 454 kg final RQ
Naphthalene	= 100 lb final RQ = 45.4 kg final RQ

SARA Section 311/312 The following EPA hazard categories apply to this product:

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

SARA Section 313: This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Saturated Hydrocarbons	None
Aromatic Hydrocarbons	None
Toluene	= 1.0 % de minimis concentration
Unsaturated Hydrocarbons	None
Ethyl Alcohol	None
Xylene	= 1.0 % de minimis concentration
1,2,4-Trimethylbenzene	= 1.0 % de minimis concentration
Benzene	= 0.1 % de minimis concentration
Hexane	= 1.0 % de minimis concentration
Ethyl Benzene	= 0.1 % de minimis concentration
Naphthalene	= 0.1 % de minimis concentration

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Saturated Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Aromatic Hydrocarbons

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed

Saturated Hydrocarbons	
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Toluene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	developmental toxicity, initial date 1/1/91
New Jersey Right-To-Know:	sn 1866
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan critical materials register list:	= 100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	flammable - third degree; teratogen
New Jersey - Environmental Hazardous Substances List:	SN 1866 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ land/water = 1000 lb RQ air
Unsaturated Hydrocarbons	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Ethyl Alcohol	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	developmental toxicity, initial date 10/1/87 (when in alcoholic beverages)
New Jersey Right-To-Know:	sn 0844

Saturated Hydrocarbons

Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Teratogen
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen; flammable - third degree; mutagen; teratogen
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Xylene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	sn 2014
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan critical materials register list:	= 100 lb Annual usage threshold all isomers
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 2014 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ land/water = 1000 lb RQ air

1,2,4-Trimethylbenzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	sn 2716
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	SN 2716 TPQ 500 lb

Saturated Hydrocarbons	
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Benzene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	carcinogen, initial date 2/27/87 developmental toxicity, initial date 12/26/97 male reproductive toxicity, initial date 12/26/97
New Jersey Right-To-Know:	sn 0197
Pennsylvania Right-To-Know:	Environmental hazard; Special hazardous substance
Massachusetts Right-To Know:	Carcinogen; Extraordinarily hazardous
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin); Carcinogen (skin)
Michigan critical materials register list:	= 100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	carcinogen; extraordinarily hazardous
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Present
New Jersey - Special Hazardous Substances:	carcinogen; flammable - third degree; mutagen; teratogen
New Jersey - Environmental Hazardous Substances List:	SN 0197 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ land/water = 10 lb RQ air
Hexane	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	sn 1340
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 1340 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ air = 1 lb RQ land/water
Ethyl Benzene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	carcinogen, initial date 6/11/04
New Jersey Right-To-Know:	sn 0851
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable

Saturated Hydrocarbons

Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen; flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0851 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ land/water = 1000 lb RQ air

Naphthalene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	sn 1322
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen
New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	= 1 lb RQ land/water = 100 lb RQ air

Canadian Regulatory Information:

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Toluene	B2, D2A, D2B	1 %
Ethyl Alcohol		0.1 %
Xylene	B2, D2A, D2B	
1,2,4-Trimethylbenzene	B3	0.1 %
Benzene	B2, D2A, D2B	0.1 %
Hexane	B2, D2A	1 %
Ethyl Benzene	B2, D2A, D2B	0.1 %
Naphthalene	B4, D2A	1 %

NOTE: Not Applicable.

[redacted]

Additional Information: No data available.

Prepared by: Mark S. Swanson, Manager, Toxicology and Product Safety

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End of Safety Data Sheet

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.08.2017 *Version number 6* *Revision: 10.08.2017*

*

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: BioPlus**
Biodegradable chain lubricant

· **Article number:** 0781 516 30..
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Sector of Use**
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· **Product category** PC24 Lubricants, greases, release products
· **Application of the substance / the mixture** Chain lube oil, based on vegetable oils.

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
ANDREAS STIHL AG & Co.KG
Badstr. 115
D-71336 Waiblingen
Tel: +49(0)7151-26-3237
Fax: +49(0)7151-26-8-3237
Email: info@stihl.com

· **Informing department:**
Produktmanagement Forsttechnik
Tel: +49(0)7151-26-3237
Fax: +49(0)7151-26-83237
· **1.4 Emergency telephone number:**
Emergency control center for poisoning cases Berlin +49 (0) 30 30 686 790 (German and English)
Information for transport Tel.: +49-621-60-43333 Fax: 49-621-60-92664

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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Safety data sheet
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Trade name: BioPlus
Biodegradable chain lubricant

(Contd. of page 1)

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Chain lube oil, based on vegetable oils, with additives.

· **Dangerous components:** Void
· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation** Supply fresh air; consult doctor in case of symptoms.
· **After skin contact** Instantly wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
· **After swallowing**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; instantly call for medical help.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
Extinguishing powder, foam or water jet. Fight larger fires with water jet or alcohol-resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
· **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire
Carbon monoxide (CO)
· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Particular danger of slipping on leaked/spilled product.
The usual precautionary measures should be adhered to general rules for handling chemicals.
· **6.2 Environmental precautions:**
Inform respective authorities in case product reaches water or sewage system.
Do not allow to enter drainage system, surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, universal binders) and disposal in suitable containers.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

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Safety data sheet
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Trade name: BioPlus
Biodegradable chain lubricant

(Contd. of page 2)

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** No special precautions necessary if used correctly.
· **Information about protection against explosions and fires:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:**
Prevent any penetration into the ground.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Must be stored in a collecting room.
· **Storage class** 10
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **8.2 Exposure controls**
· **Personal protective equipment**
· **General protective and hygienic measures**
The usual precautionary measures should be adhered to general rules for handling chemicals.
· **Breathing equipment:** Not required.
· **Protection of hands:** Not required.
· **Material of gloves**
Oil resistant gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Safety glasses recommended during refilling.
· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Brown
· **Odour:**	Type specific
· **Change in condition**	
Melting point/freezing point:	-2 bis-10°C
Initial boiling point and boiling range:	Not determined
· **Flash point:**	>230°C (DIN ISO 2592)

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according to 1907/2006/EC, Article 31

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Trade name: BioPlus
Biodegradable chain lubricant

(Contd. of page 3)

· **Self-inflammability:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive.
· **Vapour pressure:**	Not determined.
· **Density at 20°C**	0.92 g/cm³ (DIN 51757)
· **Solubility in / Miscibility with Water:**	Not miscible or difficult to mix
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
dynamic:	Not determined.
kinematic at 40°C:	37 mm²/s (ASTM D 7042)
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **Other information:** The product is readily biodegradable (OECD 301B / EU C.4-C).
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.08.2017 Version number 6 Revision: 10.08.2017

Trade name: BioPlus
Biodegradable chain lubricant

(Contd. of page 4)

· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
The waste code numbers mentioned are recommendations based on the probable use of the product.
The product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility.

· **European waste catalogue**	
13 02 07*	readily biodegradable engine, gear and lubricating oils

· **Uncleaned packagings:**
· **Recommendation:**
Dispose of packaging according to regulations on the disposal of packagings.
Packaging may be reused or recycled after cleaning.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR/RID/ADN, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR/RID/ADN, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR/RID/ADN, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR/RID/ADN, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	Void

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.08.2017 Version number 6 Revision: 10.08.2017

Trade name: BioPlus
Biodegradable chain lubricant

(Contd. of page 5)

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing data specification sheet:**
The safety data sheets were drawn up in cooperation with the Umweltkanzlei Dr.Rhein Beratungs- und Prüfgesellschaft mbH, Phone: +49 5066 900990.
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
· *** Data compared to the previous version altered.**

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1226

SC Johnson
A FAMILY COMPANY

GLADE® TOUGH ODOR SOLUTIONS AIR SANITIZER - REFRESHING CITRUS™

Version 2.0

Print Date 01/12/2011

Revision Date 11/16/2010

MSDS Number 350000009704
SITE_FORM Number
30000000000000008568.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name	:	GLADE® TOUGH ODOR SOLUTIONS AIR SANITIZER - REFRESHING CITRUS™
Use of the Substance/Mixture	:	Sanitizer
Company	:	S.C. Johnson & Son, Inc. 1525 Howe Street Racine WI 53403-2236
Emergency telephone number	:	24 Hour Transport & Medical Emergency Phone (866) 231-5406 24 Hour International Emergency Phone (952) 852-4647

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor	:	clear / aerosol / pleasant
Immediate Concerns	:	Warning FLAMMABLE: CAUSES EYE IRRITATION. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and flame. Contents under pressure. Do not puncture or incinerate. Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.

Potential Health Effects

Exposure routes	:	Eye, Skin, Inhalation, Ingestion.
Eyes	:	Causes: Moderate eye irritation
Skin	:	May cause skin reactions in rare cases. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	:	Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.
Ingestion	:	May cause irritation to mouth, throat and stomach.

May cause abdominal discomfort.

Aggravated Medical Condition : Persons with pre-existing skin disorders may be more susceptible to irritating effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Butane	106-97-8	10.00 - 30.00
Propane	74-98-6	5.00 - 10.00
Isobutane	75-28-5	5.00 - 10.00
Triethylene glycol	112-27-6	5.00 - 10.00

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : Remove contact lenses. Flush immediately with plenty of water for at least 15 to 20 minutes. Get medical attention if irritation develops and persists.

Skin contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.

Inhalation : Remove to fresh air. If breathing is affected, get medical attention.

Ingestion : If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during fire fighting : Aerosol Product - Containers may rocket or explode in heat of fire.

Further information : Fight fire from maximum distance or protected area. Cool and

use caution when approaching or handling fire-exposed containers. For large quantities of flammable liquids, consider containment to prevent the spread of fire. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

Flash point	:	< -7 °C < 19.4 °F Method: Tag Closed Cup (TCC) Note: Propellant
Lower explosion limit	:	Note: no data available
Upper explosion limit	:	Note: no data available
NFPA Classification	:	NFPA Level 1 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Remove all sources of ignition. Wear personal protective equipment.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods for cleaning up	:	If damage occurs to aerosol can: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Use only non-sparking equipment. Dike large spills. Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Advice on safe handling	:	Avoid contact with skin, eyes and clothing. Do not puncture or incinerate. Avoid breathing vapors, mist or gas. For personal protection see section 8. Do not spray toward face. Do not use in areas without adequate ventilation. Note: Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. For more

information visit www.inhalant.org.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.
Take measures to prevent the build up of electrostatic charge.

Storage

Requirements for storage areas and containers : Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Butane	106-97-8	-	1,000 ppm	-	ACGIH TWA
Propane	74-98-6	1,800 mg/m3	1,000 ppm	-	OSHA TWA
Propane	74-98-6	-	1,000 ppm	-	ACGIH TWA
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : Use only with adequate ventilation.

Hand protection : No special requirements.

Eye protection

Industrial setting : Safety glasses with side-shields

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Household setting	:	Avoid contact with eyes.
Skin and body protection	:	No special requirements.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	aerosol
Color	:	clear
Odor	:	pleasant
pH	:	Calculated8 - 9 at 20 °C
Boiling point	:	no data available
Flash point	:	< -7 °C < 19.4 °F Method: Tag Closed Cup (TCC) Propellant
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Sustains combustion
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	estimated52 psi at 70 °F
Density	:	Calculated0.80 g/cm3
Water solubility	:	partly soluble
Volatile Organic Compounds (California Air Resource Board – CARB) Total VOC (wt. %)	:	30.1 % - does not include any applicable regulatory exemptions

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10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	Strong oxidizing agents Strong acids
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous reactions	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 estimated > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 estimated > 5.36 mg/l
Acute dermal toxicity	:	LD50 estimated > 5,000 mg/kg

Chronic effects

Carcinogenicity	:	no data available
Mutagenicity	:	no data available
Reproductive effects	:	no data available
Teratogenicity	:	no data available
Sensitisation	:	Substance is not a sensitizer.

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12. ECOLOGICAL INFORMATION

Ecotoxicity effects : no data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

RCRA waste class : D001 (Ignitable Waste)

14. TRANSPORT INFORMATION

Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name	UN 1950 AEROSOLS, Flammable, 2.1
Class:	2.1
UN number	1950
Packaging group:	None.
Note:	SC Johnson ships this product as Consumer Commodity ORM-D (non-bulk packages)

Sea transport

- *IMDG:*

Proper shipping name	UN 1950 AEROSOLS, Flammable, 2.1
Class:	2
UN number:	1950
Packaging group:	None.
EmS:	F-D, S-U
Note:	Limited quantities derogation may be applicable to this product, please check transport documents.

Air transport

- *ICAO/IATA:*

Proper shipping name	UN 1950 AEROSOLS, Flammable, 2.1
Class:	2.1
UN/ID No.:	UN 1950
Packaging group:	None.

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Note: SC Johnson typically does not ship products via air, therefore it has not been determined if the product container meets current IATA/ICAO package criteria. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Registration # / Agency
4822-560/EPA

16. OTHER INFORMATION

HMIS Ratings

Health	2
Flammability	4
Reactivity	0

NFPA Ratings

Health	2
Fire	4
Reactivity	0
Special	

Further information
This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

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MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-1; Flammability-1; Reactivity-0; Special-0	**HMIS Rating:** Health-1; Flammability-1; Reactivity-0; Personal Protection-B
Manufactured For: **Lagasse Brothers, Inc.**	**DOT Hazard Classification:** ORM-D
Address: 1525 Kuebel Street	**Identity** (trade name as used on label):**SYS 2020 GLASS & WINDOW CLNR**
Address: New Orleans, LA 70123	
Phone: 800-989-7487	**MSDS Number:** 6410 Revision- 2
EMERGENCY RESPONSE NUMBER: 800-255-3924	Date Prepared: 03/16/99 Prepared By: LF/CH
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	Information Calls: (770)422-2071

18.5oz Aerosol

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ETHANOL	64-17-5	No	1000	1000	d
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	No	25	25	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	**Specific Gravity** (H_2O=1): Concentrate Only = 0.984
Vapor Pressure: PSIG @ 70°F (Aerosols): Max.60	**Vapor Pressure** (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	**Evaporation Rate** (= 1): N/E
Solubility In Water: Slight	**Water Reactive:** No

Appearance and Odor: Clear,slightly foamy spray with chemical fragrance

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) **NON-FLAMMABLE**	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A **SPECIAL FIRE FIGHTING PROCEDURES:** Self-contained breathing apparatus.	**EXTINGUISHER MEDIA:** Foam, dry chemical, carbon dioxide.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION** [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizers and alkalies.	**Conditions to Avoid:** Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: CO_2, CO

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS:

Inhalation: Excessive inhalation of vapors can be harmful and may cause headaches, dizziness, asphyxia, anesthetic effects and possible unconsciousness.

Eye Contact: Mild irritant.	**Skin Contact:** Mild irritant.

Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause cardiac abnormality, liver abnormalities, kidney and/or lung damage.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, upper respiratory conditions, liver disease & heart irregularities.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved bu U.S. Bureau of Mines for organic vapor.

Protective Gloves: Latex if skin is easily irritated.	**Eye Protection:** Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

SAFETY DATA SHEET

GOJO® Cherry Gel Pumice Hand Cleaner

Version	Revision Date:	MSDS Number:	Date of last issue: 12/15/2014
1.1	02/10/2015	36926-00002	Date of first issue: 12/15/2014

SECTION 1. IDENTIFICATION

Product name : GOJO® Cherry Gel Pumice Hand Cleaner

Manufacturer or supplier's details

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500
Akron OH 44311

Telephone : 1 (330) 255-6000

Emergency telephone : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use

Recommended use : Skin-care

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 4

Serious eye damage : Category 1

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H227 Combustible liquid.
H318 Causes serious eye damage.

Precautionary Statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Repeated exposure may cause skin dryness or cracking.
Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Distillates (petroleum), hydrotreated light	64742-47-8	>= 20 - < 30
Ethoxylated branched C11-14, C13-rich alcohols	78330-21-9	>= 5 - < 10

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and : Prolonged or repeated contact may dry skin and cause irritation.

delayed		Causes serious eye damage.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for	:	Non-sparking tools should be used.

containment and cleaning up	Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Avoid inhalation of vapor or mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	:	Keep in properly labeled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.
Materials to avoid	:	Do not store with the following product types: Strong oxidizing agents Explosives Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type	Control	Basis

		(Form of exposure)	parameters / Permissible concentration	
Distillates (petroleum), hydrotreated light	64742-47-8	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Ethoxylated branched C11-14, C13-rich alcohols	78330-21-9

Engineering measures : Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.
Use only in an area equipped with explosion proof exhaust ventilation.
Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Impervious gloves

Material : Flame retardant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection	:	Wear the following personal protective equipment: Chemical resistant goggles must be worn. If splashes are likely to occur, wear: Face-shield
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: Flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	:	Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	gel
Color	:	red, translucent
Odor	:	fruity
Odor Threshold	:	No data available
pH	:	6.5 - 8.0
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	93 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Density	:	1 g/cm3

Solubility(ies)

Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, kinematic	:	5,000 - 75,000 mm2/s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Combustible liquid. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Distillates (petroleum), hydrotreated light:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5.3 mg/l

Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Ethoxylated branched C11-14, C13-rich alcohols:
Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Expert judgment

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Ingredients:

Distillates (petroleum), hydrotreated light:
Assessment: Repeated exposure may cause skin dryness or cracking.

Ethoxylated branched C11-14, C13-rich alcohols:
Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye damage.

Ingredients:

Distillates (petroleum), hydrotreated light:
Species: Rabbit
Result: No eye irritation

Ethoxylated branched C11-14, C13-rich alcohols:
Result: Irreversible effects on the eye
Remarks: Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Ingredients:

Distillates (petroleum), hydrotreated light:
Test Type: Maximization Test (GPMT)
Routes of exposure: Skin contact

Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

Ethoxylated branched C11-14, C13-rich alcohols:
Test Type: Human repeat insult patch test (HRIPT)
Routes of exposure: Skin contact
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), hydrotreated light:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Chromosomal aberration
Species: Rat
Application Route: Intraperitoneal injection
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), hydrotreated light:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

Distillates (petroleum), hydrotreated light:
Species: Rat
NOAEL: > 10.4 mg/l
Application Route: inhalation (vapor)
Exposure time: 90 d
Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Ingredients:

Distillates (petroleum), hydrotreated light:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Distillates (petroleum), hydrotreated light:

Toxicity to fish	:	LL50 (Danio rerio (zebra fish)): > 250 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Acartia tonsa): > 3,193 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction
Toxicity to algae	:	EL50 (Skeletonema costatum (marine diatom)): > 3,200 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction NOELR (Skeletonema costatum (marine diatom)): 993 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction
Toxicity to daphnia and other	:	NOELR (Ceriodaphnia dubia (water flea)): > 70 mg/l

aquatic invertebrates (Chronic toxicity)
Exposure time: 8 d
Test substance: Water Accommodated Fraction

Toxicity to bacteria : EC50: > 100 mg/l
Exposure time: 3 h

Ethoxylated branched C11-14, C13-rich alcohols:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.6 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae : EC50: > 1 - 10 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Lepomis macrochirus (Bluegill sunfish)): > 0.33 mg/l
Exposure time: 30 d
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.77 mg/l
Exposure time: 21 d
Remarks: Based on data from similar materials

Persistence and degradability

Ingredients:

Distillates (petroleum), hydrotreated light:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 82 %
Exposure time: 24 d
Method: OECD Test Guideline 301F

Ethoxylated branched C11-14, C13-rich alcohols:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	NA 1993
Proper shipping name	:	COMBUSTIBLE LIQUID, N.O.S. (Fragrance - Cherry Bomb)
Class	:	CBL
Packing group	:	III
Labels	:	None
ERG Code	:	128
Marine pollutant	:	no
Remarks	:	Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium hydroxide	1310-73-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Water	7732-18-5	30 - 50 %
Distillates (petroleum), hydrotreated light	64742-47-8	20 - 30 %
Oleic acid	112-80-1	10 - 20 %
Ethoxylated branched C11-14, C13-rich alcohols	78330-21-9	5 - 10 %
Pumice	1332-09-8	5 - 10 %
2-Phenoxyethanol	122-99-6	0.1 - 1 %
Sodium hydroxide	1310-73-2	0.1 - 1 %

New Jersey Right To Know

Water	7732-18-5	30 - 50 %
Distillates (petroleum), hydrotreated light	64742-47-8	20 - 30 %
Oleic acid	112-80-1	10 - 20 %
Ethoxylated branched C11-14, C13-rich alcohols	78330-21-9	5 - 10 %
Pumice	1332-09-8	5 - 10 %

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

AICS : All ingredients listed or exempt.

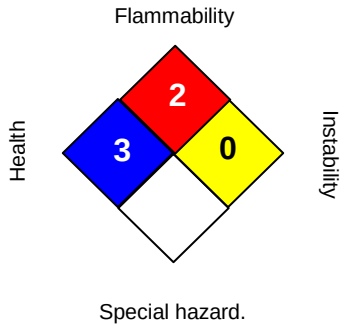
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Full text of other abbreviations

NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA	:	8-hour time weighted average
Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	02/10/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

Safety Data Sheet

1. Identification

Product Name : GROUNDED
Synonyms : None
Product Use : Spray Adjuvant
Manufacturer/Supplier : Helena Agri-Enterprises, LLC
Address : 225 Schilling Blvd. Collierville, TN 38017
General Information : 901-761-0050
Transportation Emergency Number : CHEMTREC:800-424-9300

2. Hazard Identification

Signal Word : Warning (no symbol)
Skin Irritation : Causes mild irritation with prolonged or repeated contact
Eye Irritation : Practically non-irritating
Acute Toxicity Oral : LD50 (rat) >5,000 mg/kg
Acute Toxicity Dermal : LD50 (rat) >5,050 mg/kg

Hazard Categories : Eye/Skin Irritation-2B/3; Oral/Dermal/Inhalation Toxicity-5/5/5

Hazard Statement : Causes mild skin irritation
Causes eye irritation
May be harmful if inhaled
May be harmful if swallowed
May be harmful in contact with skin

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Blend of Aliphatic Hydrocarbons, Hexahydric Alcohol Ethoxylates and C18-C20 Fatty Acids and Alkanolamides	Proprietary	99.00
Other ingredients	Nonhazardous	1.00

4. First Aid Measures

Eye : Flush eyes with water for at least 15 minutes, holding the eyelids open. If irritation develops or persists, consult a physician.
Skin : Remove contaminated clothing and wash skin with soap and water. If irritation develops or persists, consult a physician.
Inhalation : Move to fresh air and call a physician if irritation develops or persists.
Ingestion : Do not induce vomiting. Obtain emergency medical attention. Small amounts which incidentally enter the mouth should be rinsed out until taste is gone.
Indication of Immediate Medical Attention and Special Treatment Needed : There is no specific antidote. Treat symptomatically. If contact is made with the spray solution containing pesticides, follow the "Statement of Practical Treatment/First Aid" on the pesticide label.

5. Fire Fighting Measures

Extinguishing Media : Use water fog, foam, dry chemical and carbon dioxide extinguishing agents.
Specific Hazards Arising from the Chemical : Product can be made to burn even though flash point is greater than 200 Degrees F.
Special Fire Fight Proc : Wear a positive-pressure, self-contained breathing apparatus and full protective clothing when fighting fires in an enclosed area.

6. Accidental Release Measures

Personal Precautions	: Keep unprotected and unnecessary personnel away from spill area.
Protective Equipment	: Impervious gloves, splashproof goggles or face shield, impervious apron and footwear. Eyewash station should be available. Use NIOSH-approved respiratory protection if product is heated or misted.
Emergency Procedures	: Do not contaminate water supplies, lakes, streams, ponds or drains with spilled material.
Methods and Materials for Containment and Cleanup	: Clean up spills with an oil absorbent material, such as clay, sand or sawdust. Spill area will be quite slippery. Place contaminated material in a recovery or salvage drum for proper disposal.

7. Handling and Storage

Precautions for Safe Handling	: Do not allow water to be introduced into the contents of this container. Do not contaminate water sources by cleaning of equipment or disposal of rinse water.
Conditions for Safe Storage	: Store in original container only. Keep container tightly closed. Do not store with oxidizing agents or ammonium nitrate.

8. Exposure Controls / Personal Protection

TLV/PEL	: No information found
Appropriate Engineering Controls	: Ventilate as needed.
Personal Protective Equipment	: Impervious gloves, splashproof goggles or face shield, impervious apron and footwear. Eyewash station should be available. Use NIOSH-approved respiratory protection if product is heated or misted.

9. Physical and Chemical Properties

Odor/Appearance	: Clear blue liquid, mineral oil odor.
Flash Point, ^{0}F	: >200 Degrees F.
Boiling Point, ^{0}F	: 625 to 830 Degrees F.
Melting Point(Freezing point), ^{0}C	: <32 Degrees F.
Vapor Pressure, mm Hg @ 20 ^{0}C	: 0.0001 mmHg
Vapor Density	: 10+
Solubility in Water	: Dispersible
Molecular Formula	: Not applicable, formulated mixture.
Density, g/mL @ 25 ^{0}C	: 0.872-0.892
Evaporation Rate(Butyl Acetate = 1)	: 1000X
Octanol/Water Partition Coefficient	: No information found
pH	: Not applicable, non-aqueous
Flammable Limits (approximate volume % in air)	: Not determined
Auto-ignition Temperature	: 670 Degrees F. (est)
Decomposition temperature	: No information found

10. Stability and Reactivity

Reactivity	: No information found
Chemical Stability	: Stable

Hazardous Decomposition Products	: May produce oxides of carbon and asphyxiants under fire conditions.
Hazardous Polymerization	: Will not occur
Conditions to Avoid	: Avoid contact with alkalies and strong oxidizers.
Incompatible Materials	: Avoid contact with alkalies and strong oxidizers.

11. Toxicological Information

Acute Toxicity (Oral LD50)	: >5,000 mg/kg (rat)
Acute Toxicity (Dermal LD50)	: >5,050 mg/kg (rat)
Acute Toxicity Inhalation LC50	: >2.17 mg/L (rat) (vapor limit)
Likely Routes of Exposure	: Skin and eyes
Skin Irritation	: Primary dermal irritation score=0.0; non-irritating
Eye Irritation	: No positive effects <2.0 score; practically non-irritating.
Skin Sensitization	: Not a skin sensitizer.
Carcinogenic	: None currently known.
Chronic Effects	: Prolonged or repeated skin contact with skin oils, possibly leading to irritation and dermatitis; however, based on human experience and available toxicity data, this product is judged to be neither "corrosive" nor an "irritant" by OSHA criteria.
Other Hazards	: None currently known.

12. Ecological Information

Ecotoxicity	: No information found
Persistence and Degradability	: No information found
Bioaccumulative Potential	: No information found
Mobility in Soil	: No information found
Other Adverse Effects	: No information found

13. Disposal Considerations

Waste Disposal Method	: This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

14. Transport Information

UN Proper Shipping Name	: Not regulated by DOT, IATA or IMDG.
Transport Hazard Class	: None
UN Identification Number	: None
Packaging Group	: None
Environmental Hazards	: No information found
Transport in Bulk	: No information found
Special Precautions for Transportation	: No information found
Freight Classification	: Adhesives, Adjuvants, Spreaders or Stickers, N.O.I. (NMFC Item 42652, Class 60)

15. Regulatory Information

National Fire Protection Association Rating	:

Health: 1 Fire: 1 Reactivity: 0
Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

S.A.R.A Title III Hazard Classification (Yes/No) :

Immediate(Acute) Health: Y
Delayed (Chronic) Health: N
Sudden Release of Pressure: N
Fire: N
Reactive: N

16. Other Information

Data of Preparation/Revision : 18-June-2018

SAFETY DATA SHEET

Halocarbon 22 (Chlorodifluoromethane)

Airgas
an Air Liquide company

Section 1. Identification

GHS product identifier : Halocarbon 22 (Chlorodifluoromethane)

Chemical name : chlorodifluoromethane

Other means of identification : ASPEN R-22; Methane, chlorodifluoro-; Chlorodifluoromethane-Methane, chlorodifluoro-; Methane, chlorodifluoro- (Refrigerant gas R22); CHLORODIFLUOROMETHANE (FC 22); HCFC-22; Algofrene 22; Freon® 22; difluorochloromethane; Fluorocarbon 22 (Freon 22); HCFC 22

Product type : Liquefied gas

Product use : Synthetic/Analytical chemistry.Refrigeration.

Synonym : ASPEN R-22; Methane, chlorodifluoro-; Chlorodifluoromethane-Methane, chlorodifluoro-; Methane, chlorodifluoro- (Refrigerant gas R22); CHLORODIFLUOROMETHANE (FC 22); HCFC-22; Algofrene 22; Freon® 22; difluorochloromethane; Fluorocarbon 22 (Freon 22); HCFC 22

SDS # : 001016

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

24-hour telephone : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Liquefied gas
HAZARDOUS TO THE OZONE LAYER - Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May cause frostbite.
May displace oxygen and cause rapid suffocation.
Harms public health and the environment by destroying ozone in the upper atmosphere.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Store in a well-ventilated place.

Disposal : Refer to manufacturer or supplier for information on recovery or recycling.

Hazards not otherwise classified : Liquid can cause burns similar to frostbite.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : chlorodifluoromethane

Other means of identification : ASPEN R-22; Methane, chlorodifluoro-; Chlorodifluoromethane-Methane, chlorodifluoro-; Methane, chlorodifluoro- (Refrigerant gas R22); CHLORODIFLUOROMETHANE (FC 22); HCFC-22; Algofrene 22; Freon® 22; difluorochloromethane; Fluorocarbon 22 (Freon 22); HCFC 22

Product code : 001016

CAS number/other identifiers

CAS number : 75-45-6

Ingredient name	%	CAS number
chlorodifluoromethane	100	75-45-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. As this product rapidly becomes a gas when released, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Liquid can cause burns similar to frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : Ingestion of liquid can cause burns similar to frostbite.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:, frostbite

Section 4. First aid measures

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:, frostbite

Ingestion : Adverse symptoms may include the following:, frostbite

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
carbonyl halides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). May be harmful to the environment if released in large quantities.

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Avoid release to the environment. Refer to special instructions/safety data sheet. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
chlorodifluoromethane	**ACGIH TLV (United States, 3/2017).** TWA: 3540 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. **NIOSH REL (United States, 10/2016).** STEL: 4375 mg/m³ 15 minutes. STEL: 1250 ppm 15 minutes. TWA: 3500 mg/m³ 10 hours. TWA: 1000 ppm 10 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 3500 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Thermal hazards : If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Compressed gas.]

Color : Colorless.

Odor : Mild.

Odor threshold : Not available.

pH : Not available.

Melting point : -157.4°C (-251.3°F)

Boiling point : -40.8°C (-41.4°F)

Critical temperature : 96.2°C (205.2°F)

Flash point : [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 123 (psig)

Vapor density : 3 (Air = 1)

Specific Volume (ft^3/lb) : 4.4053

Gas Density (lb/ft^3) : 0.227

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : 3 g/l

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : 1.11 to 1.16

Auto-ignition temperature : 632°C (1169.6°F)

Decomposition temperature : Not available.

Viscosity : Not applicable.

Flow time (ISO 2431) : Not available.

Molecular weight : 86.47 g/mole

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
chlorodifluoromethane	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Liquid can cause burns similar to frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

Ingestion : Ingestion of liquid can cause burns similar to frostbite.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:, frostbite

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:, frostbite

Ingestion : Adverse symptoms may include the following:, frostbite

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
chlorodifluoromethane	1.11 to 1.16	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1018	UN1018	UN1018	UN1018	UN1018
UN proper shipping name	CHLORODIFLUOROMETHANE OR REFRIGERANT GAS R 22	CHLORODIFLUOROMETHANE; OR REFRIGERANT GAS R 22	CHLORODIFLUOROMETHANE OR REFRIGERANT GAS R 22	CHLORODIFLUOROMETHANE (REFRIGERANT GAS R 22)	CHLORODIFLUOROMETHANE
Transport hazard class(es)	2.2	2.2	2.2	2.2	2.2
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Additional information

Section 14. Transport information

DOT Classification : **Limited quantity** Yes.
Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg.
Special provisions T50

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).
Explosive Limit and Limited Quantity Index 0.125
Passenger Carrying Road or Rail Index 75

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 75 kg. Cargo Aircraft Only: 150 kg.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	chlorodifluoromethane	75-45-6	100
Supplier notification	chlorodifluoromethane	75-45-6	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : This material is listed.

New York : This material is listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

International regulations

Section 15. Regulatory information

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Ingredient name	Status
HCFC 22	Annex C, Group I

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Europe : This material is listed or exempted.

Japan : **Japan inventory (ENCS)**: This material is listed or exempted.
Japan inventory (ISHL): Not determined.

Malaysia : Not determined.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Taiwan : This material is listed or exempted.

Thailand : Not determined.

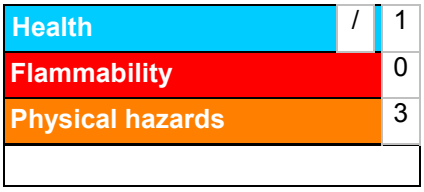
Turkey : This material is listed or exempted.

United States : This material is listed or exempted.

Viet Nam : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Section 16. Other information

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
GASES UNDER PRESSURE - Liquefied gas HAZARDOUS TO THE OZONE LAYER - Category 1	Expert judgment Expert judgment

History

Date of printing : 10/18/2018

Date of issue/Date of revision : 10/18/2018

Date of previous issue : 4/9/2018

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Other special considerations : WARNING: Contains (Chlorodifluoromethane), a substance which harms the public health and environment by destroying ozone in the upper atmosphere.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

ARI When Quality Counts PO Box 510, Orchard Hill, GA 30266	**Material Safety Data Sheet** Date: January, 2007

Section I – Product Identification

Manufacturer's Name:	ARI	**Emergency Phone #:**	800-241-5064
Address:	PO Box 510, Orchard Hill, GA 30266		
Trade Name:	Halt	**EPA #:**	7754-37
Synonyms:	Personal Dog Repellent Spray		
HMIS	Health – 1 Fire - 1 Reactivity – 0 Special Hazard - none		

Section II – Material Analysis/Active Ingredients

Component or Material Chemical Name	% of Mixture	CAS #	TLV
Nitrogen	.03%	7727-37-9	Not Established
Capsaicin	.35%	404-86-4	Not Established

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	% by Weight

This product does not contain any Section 313 chemicals.

Section III - Physical Data

Boiling Point:	212°C
Solubility in H2O % by weight	Insoluble
Specific Gravity H2O = 1	.97
Vapor pressure in can PSI at 70 degrees F	N/A
% Volatiles by Volume	0
PH	6
Appearance and Odor	Red-orange oily liquid with pungent aroma

Section IV - Fire and Explosion Data

Flash Point (Closed cup)	345°F
Flammable Explosive Limits (% volume in air)	Lower: N/A; Upper: N/A
Extinguishing Methods	Use dry chemical, foam, or carbon dioxide
Special fire and Explosion Procedures	Cool container with water if exposed
Unusual Fire and Explosion Hazard	Product packaged in aerosol form will explode under extreme heat

Section V – Health Hazard Information

HEALTH HAZARD DATA – ROUTES OF EXPOSURE

Inhalation	Burning sensation, irritation
Skin Contact	Not readily absorbed through skin
Eye Contact	Burn sensation, irritation
Ingestion	Burning sensation, irritation
Effects of Overexposure	1. Eyes could cause superficial keratitis & conjunctivitis 2. Severe irritation to lungs or stomach

EMERGENCY AND FIRST AID PROCEDURES

Eye	Flush with water
Skin	Wash areas with soap and water
Ingestion	
Inhalation	Remove to fresh air

Notes to physician: **None.**

Section VI – Reactivity Data	
Condition contributing to instability	Stable
Incompatibility	None
Hazardous decomposition products	Pungent fumes may be emitted when heated about 175ºF
Conditions contributing to hazardous polymerization	None
Section VII – Spill or Leak Procedures STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	
Neutralizing chemical	Absorb into absorbent material
Waste disposal method	Not required
Section VIII – Industrial Hygiene Control Measures	
Ventilation Requirements	If product is heated, ventilation is required
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT	
Respiratory (specific in detail)	None required
Eye	None required
Gloves	None required
Other Clothing and Equipment	None required
Section IX – Special Precautions	
Precautionary Statements	Strongly irritating to eyes, nose, and skin. Avoid contact with liquid or spray.
Other Handling and Storage Requirements	Packaged under pressure. DO NOT puncture, incinerate or store at temperatures over 120ºF.
Department of Transportation Information **PROPER SHIPPING NAME:** **HAZARD CLASS:**	 CONSUMER COMMODITY ORM-D
Prepared by: ARI	**Date:** January, 2007

ARI When Quality Counts PO Box 510, Orchard Hill, GA 30266	Material Safety Data Sheet Date: January, 2007

Section I – Product Identification

Manufacturer's Name:	ARI	**Emergency Phone #:**	800-241-5064
Address:	PO Box 510, Orchard Hill, GA 30266		
Trade Name:	Halt II	**EPA #:**	7754-41
Synonyms:	Personal Dog Repellent Spray		
HMIS	Health – 1 Fire – 1 Reactivity – 0 Special Hazard - none		

Section II – Material Analysis/Active Ingredients

Component or Material Chemical Name	% of Mixture	CAS #	TLV
Nitrogen	0.03%	7727-37-9	Not Established
Capsaicin	1.0%	404-86-4	Not Established

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Eye Contact	Burn sensation, irritation
Ingestion	Burning sensation, irritation
Effects of Overexposure	1. Eyes could cause superficial keratitis & conjunctivitis 2. Severe irritation to lungs or stomach

EMERGENCY AND FIRST AID PROCEDURES

Eye	Flush with water
Skin	Wash areas with soap and water
Ingestion	
Inhalation	Remove to fresh air

Notes to physician: **None.**

Section VI – Reactivity Data	
Condition contributing to instability	Stable
Incompatibility	None
Hazardous decomposition products	Pungent fumes may be emitted when heated about 175ºF
Conditions contributing to hazardous polymerization	None
Section VII – Spill or Leak Procedures STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	
Neutralizing chemical	Absorb into absorbent material
Waste disposal method	Not required
Section VIII – Industrial Hygiene Control Measures	
Ventilation Requirements	If product is heated, ventilation is required
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT	
Respiratory (specific in detail)	None required
Eye	None required
Gloves	None required
Other Clothing and Equipment	None required
Section IX – Special Precautions	
Precautionary Statements	Strongly irritating to eyes, nose, and skin. Avoid contact with liquid or spray.
Other Handling and Storage Requirements	Packaged under pressure. DO NOT puncture, incinerate or store at temperatures over 120ºF.
Department of Transportation Information **PROPER SHIPPING NAME:** **HAZARD CLASS:**	 CONSUMER COMMODITY ORM-D
Prepared by: ARI	**Date:** January, 2007

ScienceLab.com
Chemicals & Laboratory Equipment

Material Safety Data Sheet
Hexanes MSDS

Section 1: Chemical Product and Company Identification

Product Name: Hexanes

Catalog Codes: SLH2335, SLH2032

CAS#: 110-54-3

RTECS: MN9275000

TSCA: TSCA 8(b) inventory: Hexane

CI#: Not applicable.

Synonym:

Chemical Name: Hexane

Chemical Formula: C6-H14

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Hexanes	110-54-3	98.5-99.9

Toxicological Data on Ingredients: Hexane: ORAL (LD50): Acute: 25000 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (permeator), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to peripheral nervous system, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 225°C (437°F)

Flash Points: CLOSED CUP: -22.5°C (-8.5°F). (TAG)

Flammable Limits: LOWER: 1.15% UPPER: 7.5%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog.

Special Remarks on Fire Hazards:
Extremely flammable liquid and vapor. Vapor may cause flash fire.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with skin. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves (impervious).

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 500 (ppm) from OSHA (PEL) [United States] Inhalation TWA: 1800 (mg/m3) from OSHA (PEL) [United States] Inhalation TWA: 176 (mg/m3) from ACGIH (TLV) [United States] SKIN TWA: 50 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 500 STEL: 1000 (ppm) from ACGIH (TLV) [United States] Inhalation TWA: 1760 STEL: 3500 (mg/m3) from ACGIH (TLV) [United States] Inhalation Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Gasoline-like or petroleum-like (Slight.)

Taste: Not available.

Molecular Weight: 86.18g/mole

Color: Clear Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 68°C (154.4°F)

Melting Point: -95°C (-139°F)

Critical Temperature: Not available.

Specific Gravity: 0.66 (Water = 1)

Vapor Pressure: 17.3 kPa (@ 20°C)

Vapor Density: 2.97 (Air = 1)

Volatility: Not available.

Odor Threshold: 130 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.9

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Soluble in diethyl ether, acetone. Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ingnition sources, incompatibles.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Hexane can react vigorously with strong oxidizers (e.g. chlorine, bromine, fluorine)

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 25000 mg/kg [Rat]. Acute toxicity of the gas (LC50): 48000 ppm 4 hours [Rat].

Chronic Effects on Humans:
MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: peripheral nervous system, skin, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (permeator). Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects based on animal data. May be tumorigenic based on animal data. May affect genetic material. Passes through the placental barrier in animal.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause mild skin irritation. It can be absorbed through the skin in harmful amounts. Eyes: May cause mild eye irritation. Inhalation: May be harmful if inhaled. Inhalation of vapors may cause respiratory tract irritation. Overexposure may affect, brain, spinal cord, behavior/central and peripheral nervous systems (lightheadness, dizziness, hallucinations, paralysis, blurred vision, memory loss, headache, euphoria, general anesthetic, muscle weakness, numbness of the extremeties, asphyxia, unconciousness and possible death), metabolism, respiration, blood, cardiovascular system, gastrointestinal system (nausea) Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation with abdominal pain and nausea. May also affect the liver, blood, brain, peripheral and central nervous systems. Symptoms of over exposure by ingestion are similar to that of overexposure by inhalation.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Hexane UNNA: 1208 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Hexanes Illinois toxic substances disclosure to employee act: Hexanes Illinois chemical safety act: Hexanes New York release reporting list: Hexanes Rhode Island RTK hazardous substances: Hexanes Pennsylvania RTK: Hexanes Florida: Hexanes Minnesota: Hexanes Massachusetts RTK: Hexanes Massachusetts spill list: Hexanes New Jersey: Hexanes New Jersey spill list: Hexanes Louisiana spill reporting: Hexanes TSCA 8(b) inventory: Hexanes SARA 313 toxic chemical notification and release reporting: Hexanes CERCLA: Hazardous substances.: Hexanes: 5000 lbs. (2268 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R11- Highly flammable. R20- Harmful by inhalation. R38- Irritating to skin. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62- Possible risk of impaired fertility. R65- Harmful: may cause lung damage if swallowed. R67- Vapors may cause drowsiness or dizziness. S9- Keep container in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S29- Do not empty into drains. S33- Take precautionary measures against static discharges. S36/37- Wear suitable protective clothing and gloves. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets. S62- If swallowed, do not induce vomiting: seek medical advice immediately and show this

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: g

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves (impervious). Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:19 PM

Last Updated: 05/21/2013 12:00 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.

Safety Data Sheet (SDS)
No. 5035 Hilco Lube
SDS Revision Date: **05/08/2015**

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity	No. 5035 Hilco Lube
Alternate Names	No. 5035

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use	Lubricant
Application Method	See Label Instructions.

1.3. Details of the supplier of the safety data sheet

Company Name	Hill Manufacturing Co., Inc. 1500 Jonesboro Road SE Atlanta, GA 30315
Emergency	
24 hour Emergency Telephone No.	(800) 535-5053
Customer Service: Hill Manufacturing Co., Inc.	(404) 522-8364

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Press. Gas;H280	Contains gas under pressure; may explode if heated.
Acute Tox. 5;H313	May be harmful in contact with skin. (Not adopted by US OSHA)
STOT RE 1;H372	Causes damage to organs through prolonged or repeated exposure. Specific Target Organs: (central nervous system)

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Danger

H280 Contains gas under pressure; may explode if heated.

H313 May be harmful in contact with skin.

H372 Causes damage to organs through prolonged or repeated exposure.
This product is non-flammable according to ASTM Flame Extension Test.

[Prevention]:

P260 Do not breathe mist / vapors / spray.

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

[Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P312 Call a POISON CENTER or doctor / physician if you feel unwell.

P314 Get Medical advice / attention if you feel unwell.

P331 Do NOT induce vomiting.

[Storage]:

P410+403 Protect from sunlight. Store in a well ventilated place.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Stoddard solvent **CAS Number: 0008052-41-3**	**25 - 50**	**STOT RE 1;H372** **Asp. Tox. 1;H304**	**[1][2]**
Petroleum distillates, hydrotreated heavy naphthenic **CAS Number: 0064742-52-5**	**25 - 50**	**Acute Tox. 4;H312**	**[1]**
Distillates (petroleum), hydrotreated middleGasoil - unspecified **CAS Number: 0064742-46-7**	**10 - 25**	**Asp. Tox. 1;H304** **Acute Tox. 4;H332** **Skin Irrit. 2;H315**	**[1]**
Carbon dioxide **CAS Number: 0000124-38-9**	**1.0 - 10**	**Press. Gas;H280** **Simple Asphyxiant**	**[1][2]**
Non-Hazardous Ingredient **CAS Number: Mixture**	**1.0 - 10**	**Not Classified**	

[1] Substance classified with a health or environmental hazard.
[2] Substance with a workplace exposure limit.
[3] PBT-substance or vPvB-substance.
*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview Contact with eyes, prolonged contact with skin may cause irritation.
Inhalation - excessive exposure may irritate eyes, nose, and throat.
Harmful if swallowed.
OTHER HAZARDS: Material may mist when heated.
Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin.
Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

Skin May be harmful in contact with skin. (Not adopted by US OSHA)

5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO_2, powder, water spray.
Do not use; water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Oxides of carbon and sulfur

Do not breathe mist / vapors / spray.

Do not get in eyes, on skin, or on clothing.

5.3. Advice for fire-fighters

Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream.

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Container Warnings: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAMES, SPARKS, STATIC ELECTRICITY OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE OR CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. For work on tanks refer to Occupational Safety and Health Administration Regulations, ANSI Z49.1 and other governmental and industrial references pertaining to cleaning, repairing, welding or other contemplated operations.

7. Handling and storage

7.1. Precautions for safe handling

The requirements of the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations apply if the flashpoint is between 21°C and 32°C.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

Incompatible materials: Strong Oxidizing Agents, Strong Acids and Alkalis.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000124-38-9	Carbon dioxide	OSHA	TWA 5000 ppm (9000 mg/m3)
		ACGIH	TWA: 5000 ppm Ceiling: 15000 ppm
		NIOSH	TWA 5000 ppm (9000 mg/m3) ST 30,000 ppm (54,000 mg/m3)
		Supplier	No Established Limit
0008052-41-3	Stoddard solvent	OSHA	TWA 500 ppm (2900 mg/m3)
		ACGIH	TWA: 290 mg/m3STEL: 580 mg/m3
		NIOSH	TWA 350 mg/m3 C 1800 mg/m3 [15-minute]
		Supplier	No Established Limit
0064742-46-7	Distillates (petroleum), hydrotreated middleGasoil - unspecified	OSHA	No Established Limit
		ACGIH	No Established Limit

		NIOSH	No Established Limit
		Supplier	No Established Limit
0064742-52-5	Petroleum distillates, hydrotreated heavy naphthenic	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000124-38-9	Carbon dioxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0008052-41-3	Stoddard solvent	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0064742-46-7	Distillates (petroleum), hydrotreated middleGasoil - unspecified	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0064742-52-5	Petroleum distillates, hydrotreated heavy naphthenic	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
Eyes	Protective safety glasses recommended.
Skin	Wear overalls to keep skin contact to a minimum.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Amber Aerosol
Odor	Petroleum Odor
Odor threshold	Not Measured
pH	n/a
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	300 deg F
Flash Point	105 deg F TCC
Evaporation rate (Ether = 1)	Slower than ether
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** Not Measured
	Upper Explosive Limit: Not Measured
Vapor pressure (mmHg)	5.4 at 70 deg F
Vapor Density	4.5
Specific Gravity	0.8-0.9
Solubility in Water	Nil

Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured

9.2. Other information

DMSO extract by IP346: Less than 3.0 wt % (mineral oil component only)

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Excessive heat and open flame.

10.5. Incompatible materials

Strong Oxidizing Agents, Strong Acids and Alkalis.

10.6. Hazardous decomposition products

Oxides of carbon and sulfur

11. Toxicological information

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Stoddard solvent - (8052-41-3)	No data available	No data available	No data available	No data available	No data available
Petroleum distillates, hydrotreated heavy naphthenic - (64742-52-5)	5,000.00, Rat - Category: 5	2,000.00, Rabbit - Category: 4	No data available	No data available	No data available
Distillates (petroleum), hydrotreated middleGasoil - unspecified - (64742-46-7)	5,000.00, Rat - Category: 5	2,000.00, Rabbit - Category: 4	No data available	No data available	No data available
Carbon dioxide - (124-38-9)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	5	May be harmful in contact with skin. (Not adopted by US OSHA)
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable

Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	1	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Stoddard solvent - (8052-41-3)	Not Available	Not Available	Not Available
Petroleum distillates, hydrotreated heavy naphthenic - (64742-52-5)	5,000.00, Oncorhynchus mykiss	1,000.00, Daphnia magna	1,000.00 (96 hr), Scenedesmus subspicatus
Distillates (petroleum), hydrotreated middleGasoil - unspecified - (64742-46-7)	54.00, Jordanella floridae	68.00, Daphnia magna	Not Available
Carbon dioxide - (124-38-9)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	n/a	n/a
14.3. Transport hazard class(es)	**DOT Hazard Class:** Not Applicable **DOT Label:** ---	**IMDG:** Not Applicable **Sub Class:** Not Applicable	**Air Class:** Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable

14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification A D2A

US EPA Tier II Hazards

Fire: No

Sudden Release of Pressure: Yes

Reactive: No

Immediate (Acute): Yes

Delayed (Chronic): Yes

EPCRA 311/312 Chemicals and RQs:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

N.J. RTK Substances (>1%):

Carbon dioxide

Stoddard solvent

Penn RTK Substances (>1%):

Carbon dioxide

Stoddard solvent

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H372 Causes damage to organs through prolonged or repeated exposure.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

End of Document

MATERIAL SAFETY DATA SHEET U.S. DEPARTMENT OF LABOR
COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS, (29 CFR 1910.1200)
IMPORTANT! THIS IS YOUR ONLY COPY. PLEASE DISTRIBUTE TO ALL PLANT LOCATIONS
CODE #:2524 REV: 008 DATE SENT: 12/30/11
****

SECTION I: PRODUCT DESCRIPTION:NO.2524 GREASE BUSTER

MANUFACTURER:
HILL MFG CO., INC.
1500 JONESBORO ROAD
ATLANTA, GA 30315
EMERGENCY (800) 535-5053
M-F:9-5 (404) 522-8364
PREPARED BY: RICK GLISSON
DATE PREPARED: 10/13/10
****

SECTION II:

HAZARDOUS INGREDIENTS:	CAS #:	%:	TLV	SARA III,#313
TERPENES	5989-27-5	>1	UNKNOWN	NO
BLEND OF NONIONIC DETERGENTS		>1	UNKNOWN	NO
ALIPHATIC HYDROCARBONS	64742-48-9	>1	177 PPM	NO

HMIS RATINGS: HEALTH 2, FIRE: 2, REACTIVITY: 1, PERSONAL PROTECTION: B
****

SECTION III: PHYSICAL DATA

BOILING POINT (DEG. F.): NOT DETERMINED.
VAPOR PRESSURE (MM HG.): NOT DETERMINED.
VAPOR DENSITY (AIR=1): HEAVIER THAN AIR.
SOLUBILITY IN WATER: FORMS AN EMULSION.
SPECIFIC GRAVITY (WATER=1): 0.84
PERCENT, VOLATILE BY VOLUME (%): OVER 90%
EVAPORATION RATE (N-BUTYL ACETATE=1): SLOWER THAN N-BUTYL ACETATE.
APPEARANCE AND ODOR: ORANGE LIQUID WITH A PLEASANT CITRUS ODOR.
PH: N/A

****

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): 115 DEG. F. TAG CLOSED CUP.
FLAMMABLE LIMITS: UNKNOWN
EXTINGUISHING MEDIA: DRY CHEMICAL, FOAM, CARBON DIOXIDE
SPECIAL FIRE FIGHTING PROCEDURES: CLASS B FIRE PROCEDURES. WEAR NIOSH-APPROVED RESPIRATOR AND FULL PROTECTIVE GEAR.
UNUSUAL FIRE & EXPLOSION HAZARDS: NONE KNOWN. TREAT AS COMBUSTIBLE OR FLAMMABLE LIQUID, AS APPROPRIATE.
DOT HAZARD CLASSIFICATION: COMBUSTIBLE LIQUID, N.O.S.,NA1993, PG III

****

SECTION V : HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 5 MG/M3 (OIL MIST).
EFFECTS OF OVEREXPOSURE: EYES: CAN CAUSE SEVERE IRRITATION, TEARING AND REDNESS, BLURRED VISION. SKIN: PROLONGED OR REPEATED CONTACT CAN CAUSE IRRITATION, DEFATTING OR DRYNESS OF SKIN, DERMATITIS. INHALATION: EXCESSIVE

INHALATION OF VAPORS CAN CAUSE IRRITATION OF THE RESPIRATORY TRACT, NAUSEA, DIZZINESS, OR HEADACHE. INGESTION: CAN CAUSE SERIOUS HEALTH EFFECT INCLUDES NAUSEA, VOMITING, GASTROINTESTINAL IRRITATION.
EMERGENCY & FIRST AID PROCEDURES: EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES, GET MEDICAL ATTENTION. SKIN: WASH THOROUGHLY WITH SOAP & WATER. REMOVE CONTAMINATED CLOTHING. INHALATION: IF AFFECTED BY VAPORS, GET TO FRESH AIR. IF BREATHING IS DIFFICULT, SEE PHYSICIAN. ASPIRATION OF LARGE AMOUNTS OF IRRITANT LIQUIDS INTO THE LUNGS CAN BE FATAL. GET IMMEDIATE MEDICAL ATTENTION. INGESTION: INDUCE VOMITING. SEE PHYSICIAN IMMEDIATELY.
CARCINOGENICITY: NONE KNOWN.
PRIMARY ROUTES OF EXPOSURE: SKIN, INHALATION
****

SECTION VI : REACTIVITY DATA
STABILITY: STABLE CONDITIONS TO AVOID: N/A
INCOMPATABILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS.
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON DIOXIDE OR CARBON MONOXIDE AND SMOKE ON COMBUSTION.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR. CONDITIONS TO AVOID: N/A

****

SECTION VII: SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE IGNITION SOURCES. CONTAIN SPILL. ABSORB WITH SUITABLE ABSORBENTS FOR DISPOSAL.
WASTE DISPOSAL METHOD: SOAK UP WITH ABSORBENT MATERIAL FOR INCINERATION OR BURIAL IN APPROVED LANDFILL, AWAY FROM GROUND WATERS. OBSERVE LOCAL, STATE AND FEDERAL REGULATIONS.

****

SECTION VIII: SPECIAL PROTECTION INFORMATION
RESPIRATORY PROTECTION (SPECIFY TYPE): NONE NORMALLY REQUIRED WITH ADEQUATE VENTILATION.
VENTILATION: LOCAL, MECHANICAL (GENERAL) RECOMMENDED: USUALLY ADEQUATE.
PROTECTIVE GLOVES: NEOPRENE
EYE PROTECTION: CHEMICAL SPLASH PROOF GOGGLES.
OTHER PROTECTIVE EQUIPMENT: NONE NORMALLY NEEDED

****

SECTION IX: SPECIAL PRECAUTIONS
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: ALWAYS STORE UNUSED PORTION IN ORIGINAL CONTAINER WITH CAP SECURE. NEVER STORE IN UNLABELED OR IMPROPERLY LABELED CONTAINER. HANDLE AS FLAMMABLE OR COMBUSTIBLE LIQUID, AS APPROPRIATE.
OTHER PRECAUTIONS: AS WITH ALL CHEMICALS, USE WITH DUE CARE ACCORDING TO LABEL INSTRUCTIONS AND PRECAUTIONS.
KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL/INDUSTRIAL USE ONLY.

MATERIAL SAFETY DATA SHEET U.S. DEPARTMENT OF LABOR
COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS, (29 CFR 1910.1200)
IMPORTANT! THIS IS YOUR ONLY COPY. PLEASE DISTRIBUTE TO ALL PLANT LOCATIONS
CODE #:5035 REV: 008 DATE SENT: 12/30/11
****

SECTION I: PRODUCT DESCRIPTION:NO. 5035 HILCOLUBE

MANUFACTURER:
HILL MFG CO., INC.
1500 JONESBORO ROAD
ATLANTA, GA 30315
EMERGENCY (800) 535-5053
M-F:9-5 (404) 522-8364
PREPARED BY: RICK GLISSON
DATE PREPARED: 08/04/04
****

SECTION II:

HAZARDOUS INGREDIENTS:	CAS #:	%:	TLV	SARA III #313
CARBON DIOXIDE	124-38-9	>1	5000 PPM	
ALIPHATIC HYDROCARBON. .	.8052-41-3	>1	100 PPM	

HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: B
****

SECTION III: PHYSICAL DATA

BOILING POINT (DEG. F.): 300
VAPOR PRESSURE (MM HG.): 5.4 AT 70 DEG. F.
VAPOR DENSITY (AIR=1): 4.5
SOLUBILITY IN WATER: NIL
SPECIFIC GRAVITY (H2O=1): 0.8-0.9
PERCENT, VOLATILE BY VOLUME (%): 90%
EVAPORATION RATE (ETHER =1): SLOWER THAN ETHER.
APPEARANCE AND ODOR: AMBER LIQUID, WITH PETROLEUM ODOR.
PH: N/A

****

SECTION IV: FIRE AND EXPLOSION DATA

NOT FLAMMABLE AEROSOL BY FLAME EXTENSION TEST
FLAMMABLE LIMITS: N/A
FLASH POINT (METHOD USED): 105 DEG F TCC (CONCENTRATE)
EXTINGUISHING MEDIA: WATER SPRAY, CARBON DIOXIDE, DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.
UNUSUAL FIRE & EXPLOSION HAZARDS: CAN MAY BURST WHEN EXPOSED TO HEAT ABOVE 120 DEG. F.
TRANSPORTATION: DOT HAZARD CLASSIFICATION: ORM-D

****

SECTION V : HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 100 PPM PEL:100PPM NIOSH:350 MG/CUM 8 HR SAMPLE
EFFECTS OF OVEREXPOSURE: EXCESSIVE INHALATION MAY CAUSE HEADACHE, DIZZINESS, OR NAUSEA.

EMERGENCY AND FIRST AID PROCEDURES: EYE: FLUSH WITH WATER. SKIN: WASH WITH MILD SOAP AND APPLY MILD SKIN CREAM. INHALATION: GET OUT TO FRESH AIR, CALL PHYSICIAN, USE ARTIFICIAL RESPIRATION IF NECESSARY. INGESTION: DO NOT INDUCE VOMITING. ASPIRATION INTO LUNGS MAY CAUSE CHEMICAL PNEUMONITIS WHICH MAY BE FATAL. KEEP PATIENT WARM, QUIET. GET MEDICAL HELP.
CARCINOGENICITY: NONE KNOWN.
PRIMARY ROUTES OF EXPOSURE: SKIN, INHALATION

****

SECTION VI : REACTIVITY DATA

STABILITY: STABLE CONDITIONS TO AVOID: N/A
INCOMPATABILITY (MATERIALS TO AVOID): AVOID STRONG OXIDIZERS.
HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY YIELD CARBON MONOXIDE.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR. CONDITIONS TO AVOID: N/A

****

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: FLUSH WITH WATER INTO RETAINING AREA OR CONTAINER. AVOID EXPOSURE TO HEAT, SPARKS & OPEN FLAME. LARGE SPILL: SOAK UP WITH ABSORBENT MATERIAL.
WASTE DISPOSAL METHOD: DISPOSE OF UNDER SAFE CONDITIONS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. WRAP CAN IN NEWSPAPER AND TRASH.

****

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): NONE NORMALLY NEEDED.
VENTILATION: LOCAL EXHAUST: YES, TO KEEP TLV BELOW MAX.
PROTECTIVE GLOVES: NONE NORMALLY NEEDED.
EYE PROTECTION: CHEMICAL SPLASH PROOF GOGGLES.
OTHER PROTECTIVE EQUIPMENT: NONE NORMALLY NEEDED.

****

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
ALWAYS STORE UNUSED PORTION IN ORIGINAL CONTAINER WITH CAP SECURE.
NEVER STORE IN UNLABELED OR IMPROPERLY LABELED CONTAINER.
KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. AVOID PROLONGED CONTACT WITH SKIN. USE WITH ADEQUATE VENTILATION. STORE IN COOL, DRY PLACE.
OTHER PRECAUTIONS: AS WITH ALL CHEMICALS, USE WITH DUE CARE ACCORDING TO LABEL INSTRUCTIONS AND PRECAUTIONS.
KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL/INDUSTRIAL USE ONLY.

MATERIAL SAFETY DATA SHEET U.S. DEPARTMENT OF LABOR
COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS, (29 CFR 1910.1200)
IMPORTANT! THIS IS YOUR ONLY COPY. PLEASE DISTRIBUTE TO ALL PLANT LOCATIONS
CODE #:5195 REV: 003 DATE SENT: 12/30/11
****

SECTION I: PRODUCT DESCRIPTION:NO. 5195 GASKET-IN-A-CAN

MANUFACTURER:
HILL MFG CO., INC.
1500 JONESBORO ROAD
ATLANTA, GA 30315
EMERGENCY (800) 535-5053
M-F:9-5 (404) 522-8364
PREPARED BY: RICK GLISSON
DATE PREPARED: 09/07/06
****

SECTION II:

HAZARDOUS INGREDIENTS:	CAS #:	%:	TLV	SARA III,#313
METHYLTRIACETOXYSILANE	4253-34-3	2	10 (BASED ON ACETIC ACID)	
ETHYLTRIACETOXYSILANE	17689-77-9	2	"	
SILICA	7631-86-9	9	20 MPPCF	

HMIS RATING: HEALTH 1, FIRE 1, REACTIVITY 0, PERSONAL PROTECTION A
****

SECTION III: PHYSICAL DATA

BOILING POINT (DEG. F.): ABOVE 300
VAPOR PRESSURE (MM HG.): LESS THAN 5 MM (RTV); 70 PSIG FOR PRESSURE AGENT
VAPOR DENSITY (AIR=1): N/A
SOLUBILITY IN WATER: LESS THAN 0.1%
SPECIFIC GRAVITY (WATER=1): 1.05
PERCENT, VOLATILE BY VOLUME (%): LESS THAN 5%
EVAPORATION RATE (ETHER=1): LESS THAN 1
APPEARANCE AND ODOR: ORANGE ACETIC ACID-LIKE, PASTE, VARIES
PH: N/A

****

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): OPEN CUP ABOVE 250 DEG. F/120 DEG. C
FLAMMABLE LIMITS: N/A
EXTINGUISHING MEDIA: CARBON DIOXIDE OR FOAM
SPECIAL FIRE FIGHTING PROCEDURES: SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: CONTENTS UNDER PRESSURE. HIGH TEMPERATURES MAY CAUSE THE CONTAINER TO RUPTURE.
TRANSPORTATION: DOT HAZARD CLASSIFICATION: ORM-D

****

SECTION V: HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 10 PPM (BASED ON LIBERATED ACETIC ACID)
EFFECTS OF OVEREXPOSURE: IRRITATES EYES. PROLONGED OR REPEATED CONTACT MAY

IRRITATE SKIN.
EMERGENCY & FIRST AID PROCEDURES: EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. INGESTION: GET MEDICAL ATTENTION. INHALATION: REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION.
PRIMARY ROUTES OF EXPOSURE: SKIN
CARCINOGENICITY: NONE KNOWN.

****

SECTION VI: REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: AIR OR MOISTURE CAUSES POLYMERIZATION AND ACETIC ACID VAPORS ARE FORMED.
INCOMPATABILITY: OXIDIZING MATERIAL CAN CAUSE A REACTION.
HAZARDOUS DECOMPOSITION PRODUCTS: SILICON DIOXIDE, CARBON DIOXIDE, AND TRACES OF INCOMPLETELY BURNED CARBON PRODUCTS.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR. CONDITIONS TO AVOID: NONE

****

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: USE ABSORBENT MATERIAL TO COLLECT AND CONTAIN FOR SALVAGE OR DISPOSAL.
WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

****

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): ACID VAPOR TYPE.
VENTILATION: MECHANICAL (GENERAL) RECOMMENDED.
PROTECTIVE GLOVES: RUBBER GLOVES
EYE PROTECTION: PROPER EYE PROTECTION SHOULD BE WORN IN ANY TYPE OF INDUSTRIAL OPERATION.
OTHER PROTECTIVE EQUIPMENT: AS REQUIRED BY YOUR COMPANY

****

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORE BELOW 120 DEG. F. USE REASONABLE CARE.
OTHER PRECAUTIONS: AS WITH ALL CHEMICALS, USE WITH DUE CARE ACCORDING TO LABEL INSTRUCTIONS AND PRECAUTIONS.
KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL/INDUSTRIAL USE ONLY.

MATERIAL SAFETY DATA SHEET U.S. DEPARTMENT OF LABOR
COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS, (29 CFR 1910.1200)
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CODE #:5195 REV: 003 DATE SENT: 12/30/11
****

SECTION I: PRODUCT DESCRIPTION:NO. 5195 GASKET-IN-A-CAN

MANUFACTURER:
HILL MFG CO., INC.
1500 JONESBORO ROAD
ATLANTA, GA 30315
EMERGENCY (800) 535-5053
M-F:9-5 (404) 522-8364
PREPARED BY: RICK GLISSON
DATE PREPARED: 09/07/06
****

SECTION II:

HAZARDOUS INGREDIENTS:	CAS #:	%:	TLV	SARA III,#313
METHYLTRIACETOXYSILANE	4253-34-3	2	10 (BASED ON ACETIC ACID)	
ETHYLTRIACETOXYSILANE	17689-77-9	2	"	
SILICA	7631-86-9	9	20 MPPCF	

HMIS RATING: HEALTH 1, FIRE 1, REACTIVITY 0, PERSONAL PROTECTION A
****

SECTION III: PHYSICAL DATA

BOILING POINT (DEG. F.): ABOVE 300
VAPOR PRESSURE (MM HG.): LESS THAN 5 MM (RTV); 70 PSIG FOR PRESSURE AGENT
VAPOR DENSITY (AIR=1): N/A
SOLUBILITY IN WATER: LESS THAN 0.1%
SPECIFIC GRAVITY (WATER=1): 1.05
PERCENT, VOLATILE BY VOLUME (%): LESS THAN 5%
EVAPORATION RATE (ETHER=1): LESS THAN 1
APPEARANCE AND ODOR: ORANGE ACETIC ACID-LIKE, PASTE, VARIES
PH: N/A

****

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): OPEN CUP ABOVE 250 DEG. F/120 DEG. C
FLAMMABLE LIMITS: N/A
EXTINGUISHING MEDIA: CARBON DIOXIDE OR FOAM

SPECIAL FIRE FIGHTING PROCEDURES: SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: CONTENTS UNDER PRESSURE. HIGH TEMPERATURES MAY CAUSE THE CONTAINER TO RUPTURE.
TRANSPORTATION: DOT HAZARD CLASSIFICATION: ORM-D

****

SECTION V: HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 10 PPM (BASED ON LIBERATED ACETIC ACID)
EFFECTS OF OVEREXPOSURE: IRRITATES EYES. PROLONGED OR REPEATED CONTACT MAY IRRITATE SKIN.
EMERGENCY & FIRST AID PROCEDURES: EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. INGESTION: GET MEDICAL ATTENTION. INHALATION: REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION.
PRIMARY ROUTES OF EXPOSURE: SKIN
CARCINOGENICITY: NONE KNOWN.

****

SECTION VI: REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: AIR OR MOISTURE CAUSES POLYMERIZATION AND ACETIC ACID VAPORS ARE FORMED.
INCOMPATABILITY: OXIDIZING MATERIAL CAN CAUSE A REACTION.
HAZARDOUS DECOMPOSITION PRODUCTS: SILICON DIOXIDE, CARBON DIOXIDE, AND TRACES OF INCOMPLETELY BURNED CARBON PRODUCTS.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR. CONDITIONS TO AVOID: NONE

****

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: USE ABSORBENT MATERIAL TO COLLECT AND CONTAIN FOR SALVAGE OR DISPOSAL.
WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

****

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): ACID VAPOR TYPE.
VENTILATION: MECHANICAL (GENERAL) RECOMMENDED.
PROTECTIVE GLOVES: RUBBER GLOVES
EYE PROTECTION: PROPER EYE PROTECTION SHOULD BE WORN IN ANY TYPE OF

INDUSTRIAL OPERATION.
OTHER PROTECTIVE EQUIPMENT: AS REQUIRED BY YOUR COMPANY

****

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORE BELOW 120 DEG. F.
USE REASONABLE CARE.
OTHER PRECAUTIONS: AS WITH ALL CHEMICALS, USE WITH DUE CARE ACCORDING TO
LABEL INSTRUCTIONS AND PRECAUTIONS.
    KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL/INDUSTRIAL USE ONLY.

MATERIAL SAFETY DATA SHEET U.S. DEPARTMENT OF LABOR
COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS, (29 CFR 1910.1200)
IMPORTANT! THIS IS YOUR ONLY COPY. PLEASE DISTRIBUTE TO ALL PLANT LOCATIONS
CODE #:5259 REV: 003 DATE SENT: 12/30/11
****

SECTION I: PRODUCT DESCRIPTION:NO. 5259 MINK OIL LUBE II AERO

MANUFACTURER:
HILL MFG CO., INC.
1500 JONESBORO ROAD
ATLANTA, GA 30315
EMERGENCY (800) 535-5053
M-F:9-5 (404) 522-8364
PREPARED BY: RICK GLISSON
DATE PREPARED: 06/23/04
****

SECTION II:

HAZARDOUS INGREDIENTS:	CAS #:	%:	TLV	SARA III #313
CARBON DIOXIDE	124-38-9	4	5000	
ALIPHATIC HYDROCARBONS	64742-47-83	35-45	5MG/M3	

HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: B
****

SECTION III: PHYSICAL DATA

BOILING POINT (DEG. F.): 340
VAPOR PRESSURE (MM HG.): 2 MM AT 70 DEG. F.
VAPOR DENSITY (AIR=1): 4.5
SOLUBILITY IN WATER: NIL
SPECIFIC GRAVITY (H2O=1): 0.8 (CONC)
PERCENT, VOLATILE BY VOLUME (%): 90%
EVAPORATION RATE (ETHER =1): SLOWER THAN ETHER.
APPEARANCE AND ODOR: AMBER LIQUID, WITH PETROLEUM ODOR.
PH: N/A

****

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): 145 DEG. F. TCC (CONC)
FLAMMABLE LIMITS: LEL 0.7%
EXTINGUISHING MEDIA: WATER SPRAY, CARBON DIOXIDE, DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.
UNUSUAL FIRE & EXPLOSION HAZARDS: CAN MAY BURST WHEN EXPOSED TO HEAT ABOVE 120 DEG. F.
TRANSPORTATION: DOT HAZARD CLASSIFICATION: ORM-D

****

SECTION V : HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 5 MG/M3
EFFECTS OF OVEREXPOSURE: EXCESSIVE INHALATION MAY CAUSE HEADACHE, DIZZINESS, OR NAUSEA.

EMERGENCY AND FIRST AID PROCEDURES: EYE: FLUSH WITH WATER. SKIN: WASH WITH MILD SOAP AND APPLY MILD SKIN CREAM. INHALATION: GET OUT TO FRESH AIR, CALL PHYSICIAN, USE ARTIFICIAL RESPIRATION IF NECESSARY.
CARCINOGENICITY: NONE KNOWN.
PRIMARY ROUTES OF EXPOSURE: SKIN, INHALATION

****

SECTION VI : REACTIVITY DATA

STABILITY: STABLE CONDITIONS TO AVOID: N/A
INCOMPATABILITY (MATERIALS TO AVOID): AVOID STRONG OXIDIZERS.
HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY YIELD CARBON MONOXIDE.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR. CONDITIONS TO AVOID: N/A

****

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: FLUSH WITH WATER INTO RETAINING AREA OR CONTAINER. AVOID EXPOSURE TO HEAT, SPARKS & OPEN FLAME. LARGE SPILL: SOAK UP WITH ABSORBENT MATERIAL.
WASTE DISPOSAL METHOD: DISPOSE OF UNDER SAFE CONDITIONS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. WRAP CAN IN NEWSPAPER AND TRASH.

****

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): NONE NORMALLY NEEDED.
VENTILATION: LOCAL EXHAUST: YES, TO KEEP TLV BELOW MAX.
PROTECTIVE GLOVES: NONE NORMALLY NEEDED.
EYE PROTECTION: CHEMICAL SPLASH PROOF GOGGLES.
OTHER PROTECTIVE EQUIPMENT: NONE NORMALLY NEEDED.

****

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
ALWAYS STORE UNUSED PORTION IN ORIGINAL CONTAINER WITH CAP SECURE.
NEVER STORE IN UNLABELED OR IMPROPERLY LABELED CONTAINER.
KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. AVOID PROLONGED CONTACT WITH SKIN. USE WITH ADEQUATE VENTILATION. STORE IN COOL, DRY PLACE.
OTHER PRECAUTIONS:
AS WITH ALL CHEMICALS, USE WITH DUE CARE ACCORDING TO LABEL INSTRUCTIONS AND PRECAUTIONS.
KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL/INDUSTRIAL USE ONLY.

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CODE #:5259 REV: 003 DATE SENT: 12/30/11
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SECTION I: PRODUCT DESCRIPTION:NO. 5259 MINK OIL LUBE II AERO

MANUFACTURER:
HILL MFG CO., INC.
1500 JONESBORO ROAD
ATLANTA, GA 30315
EMERGENCY (800) 535-5053
M-F:9-5 (404) 522-8364
PREPARED BY: RICK GLISSON
DATE PREPARED: 06/23/04
****

SECTION II:

HAZARDOUS INGREDIENTS:	CAS #:	%:	TLV	SARA III #313
CARBON DIOXIDE	124-38-9	4	5000	
ALIPHATIC HYDROCARBONS	64742-47-83	35-45	5MG/M3	

HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: B
****

SECTION III: PHYSICAL DATA

BOILING POINT (DEG. F.): 340
VAPOR PRESSURE (MM HG.): 2 MM AT 70 DEG. F.
VAPOR DENSITY (AIR=1): 4.5
SOLUBILITY IN WATER: NIL
SPECIFIC GRAVITY (H2O=1): 0.8 (CONC)
PERCENT, VOLATILE BY VOLUME (%): 90%
EVAPORATION RATE (ETHER =1): SLOWER THAN ETHER.
APPEARANCE AND ODOR: AMBER LIQUID, WITH PETROLEUM ODOR.
PH: N/A

****

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): 145 DEG. F. TCC (CONC)
FLAMMABLE LIMITS: LEL 0.7%
EXTINGUISHING MEDIA: WATER SPRAY, CARBON DIOXIDE, DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS
WITH A FULL FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE

PRESSURE MODE.
UNUSUAL FIRE & EXPLOSION HAZARDS: CAN MAY BURST WHEN EXPOSED TO HEAT ABOVE 120 DEG. F.
TRANSPORTATION: DOT HAZARD CLASSIFICATION: ORM-D

****

SECTION V : HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 5 MG/M3
EFFECTS OF OVEREXPOSURE: EXCESSIVE INHALATION MAY CAUSE HEADACHE, DIZZINESS, OR NAUSEA.
EMERGENCY AND FIRST AID PROCEDURES: EYE: FLUSH WITH WATER. SKIN: WASH WITH MILD SOAP AND APPLY MILD SKIN CREAM. INHALATION: GET OUT TO FRESH AIR, CALL PHYSICIAN, USE ARTIFICIAL RESPIRATION IF NECESSARY.
CARCINOGENICITY: NONE KNOWN.
PRIMARY ROUTES OF EXPOSURE: SKIN, INHALATION
****

SECTION VI : REACTIVITY DATA

STABILITY: STABLE   CONDITIONS TO AVOID: N/A
INCOMPATABILITY (MATERIALS TO AVOID): AVOID STRONG OXIDIZERS.
HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY YIELD CARBON MONOXIDE.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR. CONDITIONS TO AVOID: N/A

****

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: FLUSH WITH WATER INTO RETAINING AREA OR CONTAINER. AVOID EXPOSURE TO HEAT, SPARKS & OPEN FLAME. LARGE SPILL: SOAK UP WITH ABSORBENT MATERIAL.
WASTE DISPOSAL METHOD: DISPOSE OF UNDER SAFE CONDITIONS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. WRAP CAN IN NEWSPAPER AND TRASH.

****

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): NONE NORMALLY NEEDED.
VENTILATION: LOCAL EXHAUST: YES, TO KEEP TLV BELOW MAX.
PROTECTIVE GLOVES: NONE NORMALLY NEEDED.
EYE PROTECTION: CHEMICAL SPLASH PROOF GOGGLES.
OTHER PROTECTIVE EQUIPMENT: NONE NORMALLY NEEDED.

****

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
ALWAYS STORE UNUSED PORTION IN ORIGINAL CONTAINER WITH CAP SECURE.
NEVER STORE IN UNLABELED OR IMPROPERLY LABELED CONTAINER.
KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. AVOID PROLONGED CONTACT WITH SKIN. USE WITH ADEQUATE VENTILATION. STORE IN COOL, DRY PLACE.

OTHER PRECAUTIONS:
AS WITH ALL CHEMICALS, USE WITH DUE CARE ACCORDING TO LABEL INSTRUCTIONS AND PRECAUTIONS.
KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL/INDUSTRIAL USE ONLY.

HILL 5323

MATERIAL SAFETY DATA SHEET U.S. DEPARTMENT OF LABOR
COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS, (29 CFR 1910.1200)
IMPORTANT! THIS IS YOUR ONLY COPY. PLEASE DISTRIBUTE TO ALL PLANT LOCATIONS
CODE #:5323 REV: 004 DATE SENT: 12/30/11
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SECTION I: PRODUCT DESCRIPTION:NO. 5323 SAFETY SOLV II AERO

MANUFACTURER:
HILL MFG CO., INC.
1500 JONESBORO ROAD
ATLANTA, GA 30315
EMERGENCY (800) 535-5053
M-F:9-5 (404) 522-8364
PREPARED BY: RICK GLISSON
DATE PREPARED: 11/14/00
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SECTION II:

HAZARDOUS INGREDIENTS:	CAS #:	%:	TLV	SARA III,#313
ETHYLENE TRICHLORIDE	79-01-6	>1	50 PPM	*
CARBON DIOXIDE	124-38-9	>1	5000 PPM	

HMIS RATINGS: HEALTH 3, FIRE: 0, REACTIVITY: 0, PERSONAL PROTECTION: B
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SECTION III: PHYSICAL DATA

BOILING POINT (DEG. F.): 189 AT 760.00 MMHG.
VAPOR PRESSURE (MM HG.): 60 AT 68 DEG. F. (OF CONCENTRATE) CAN 90 PSI
VAPOR DENSITY (AIR=1): 4.5
SOLUBILITY IN WATER: NIL
SPECIFIC GRAVITY (H2O=1): 1.462
PERCENT VOLATILE BY VOLUME (%): 100
EVAPORATION RATE (ETHER=1): 3.10
APPEARANCE AND ODOR: COLORLESS LIQUID, WINTERGREEN ODOR
PH: N/A

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SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): N/A
FLAMMABLE LIMITS: LEL: 8.0 UEL: 10.5
EXTINGUISHING MEDIA: WATER FOG
SPECIAL FIRE FIGHTING PROCEDURES: WATER MAY BE USED TO KEEP FIRE-EXPOSED CONTAINERS COOL UNTIL FIRE IS OUT. SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.
UNUSUAL FIRE & EXPLOSION HAZARDS: CAN MAY BURST AT TEMPERATURES ABOVE 120 DEGS F.

DOT HAZARD CALSSIFICATION: ORM-D

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SECTION V : HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 50 PPM

EFFECTS OF OVEREXPOSURE: EYES: CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION. SKIN: PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS. INHALATION: EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL & RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS & EVEN ASPHYXIATION. INGESTION: CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING & DIARRHEA.
EMERGENCY & FIRST AID PROCEDURES: SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP & WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE. EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION. INGESTION: DO NOT INDUCE VOMITING. CALL PHYSICIAN OR TRANSPORT TO AN EMERGENCY FACILITY.
INHALATION: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET & GET MEDICAL ATTENTION.
CARCINOGENICITY: YES
PRIMARY ROUTE OF EXPOSURE: INHALATION
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SECTION VI : REACTIVITY DATA

STABILITY: STABLE CONDITIONS TO AVOID: N/A
INCOMPATABILITY (MATERIALS TO AVOID): WATER, REACTIVE METALS SUCH AS ALUMINUM & MAGNESIUM, OPEN FLAME, WELDING ARCS, RESISTANCE HEATERS, ETC., WHICH CAN RESULT IN THERMAL DECOMPOSITION RELEASING HYDROGEN CHLORIDE & SMALL AMOUNTS OF PHOSGENE & CHLORINE.
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON DIOXIDE & CARBON MONOXIDE, HYDROGEN CHLORIDE, PHOSGENE, VARIOUS HYDROCARBONS, ETC.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR CONDITIONS TO AVOID: N/A

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SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT OR OTHER ABSORBENT MATERIAL. LARGE SPILL: PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT OR OTHER ABSORBENT MATERIAL & SHOVELED INTO CONTAINERS.
WASTE DISPOSAL METHOD: SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. LARGE SPILL: DESTROY BY LIQUID INCINERATION WITH OFF-GAS SCRUBBER. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

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SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.
VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).
PROTECTIVE GLOVES: NEOPRENE GLOVES FOR PROLONGED USE.

EYE PROTECTION: CHEMICAL SPLASH PROOF GOGGLES.
OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

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SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING: CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED, SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID AND/OR SOLID). ALL HAZARD PRECAUTIONS GIVEN ON THIS DATA SHEET MUST BE OBSERVED. OVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN HUMANS: CARDIAC ABNORMALITY, LIVER ABNORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE. KEEP CAN BELOW 120 DEG F TO PREVENT BURSTING.
OTHER PRECAUTIONS:
KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL/INDUSTRIAL USE ONLY.

SAFETY DATA SHEET

1. Identification

Product identifier	HP Color LaserJet CE400A-X-XC-YC Black Print Cartridge
Other means of identification	None.
Recommended use	This product is a black toner preparation that is used in HP LaserJet Enterprise 500 Color M551 / HP LaserJet Enterprise 500 color MFP M575 /HP LaserJet Pro 500 color MFP M570 series printers.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

HP Inc.
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States

Telephone	650-857-5020
HP Inc. health effects line	
(Toll-free within the US)	1-800-457-4209
(Direct)	1-760-710-0048
HP Inc. Customer Care Line	
(Toll-free within the US)	1-800-474-6836
(Direct)	1-208-323-2551
Email:	hpcustomer.inquiries@hp.com

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	Not available.
Precautionary statement	
Prevention	Not available.
Response	Not available.
Storage	Not available.
Disposal	Not available.
Hazard(s) not otherwise classified (HNOC)	Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.
Supplemental information	This product is not classified as hazardous according to OSHA CFR 1910.1200 (HazCom 2012).

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Styrene acrylate copolymer		Trade Secret	<85
Carbon black		1333-86-4	<10

Chemical name	Common name and synonyms	CAS number	%
Wax	Wax	Trade Secret	<10
Amorphous silica	Amorphous silica	7631-86-9	<3
Titanium dioxide		13463-67-7	<1

4. First-aid measures

Inhalation Move person to fresh air immediately. If irritation persists, consult a physician.

Skin contact Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.

Eye contact Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.

Ingestion Rinse mouth out with water. Drink one to two glasses of water. If symptoms occur, consult a physician.

Most important symptoms/effects, acute and delayed Not available.

5. Fire-fighting measures

Suitable extinguishing media CO2, water, or dry chemical

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air.

Special protective equipment and precautions for firefighters Not available.

Fire fighting equipment/instructions If fire occurs in the printer, treat as an electrical fire.

Specific methods None established.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Minimize dust generation and accumulation.

Methods and materials for containment and cleaning up Slowly vacuum or sweep the material into a bag or other sealed container. Clean remainder with a damp cloth or vacuum cleaner. If a vacuum is used, the motor must be rated as dust explosion-proof. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with federal, state, and local regulations.

Environmental precautions Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.

7. Handling and storage

Precautions for safe handling Keep out of the reach of children. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Keep away from excessive heat, sparks, and open flames.

Conditions for safe storage, including any incompatibilities Keep out of the reach of children. Keep tightly closed and dry. Store at room temperature. Store away from strong oxidizers.

8. Exposure controls/personal protection

Occupational exposure limits This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m3	
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Amorphous silica (CAS 7631-86-9)	TWA	6 mg/m3
Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines USA OSHA (TWA/PEL): 15 mg/m3 (Total Dust), 5 mg/m3 (Respirable Fraction)

ACGIH (TWA/TLV): 10 mg/m3 (Inhalable Particulate), 3 mg/m3 (Respirable Particulate)

Amorphous silica: USA OSHA (TWA/PEL): 20 mppcf 80 (mg/m3)/%SiO2, ACGIH (TWA/TLV): 10 mg/m3

TRGS 900 (Luftgrenzwert) - 10 mg/m3 (Einatembare partikel), 3 mg/m3 (Alveolengängige fraktion)

Appropriate engineering controls Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Not available.

Other Not available.

Respiratory protection Not available.

Thermal hazards Not available.

9. Physical and chemical properties

Appearance Fine powder

Physical state Solid.

Form solid

Color Black.

Odor Slight plastic odor

Odor threshold Not available.

pH Not applicable

Melting point/freezing point Not available.

Initial boiling point and boiling range Not applicable

Flash point Not applicable

Evaporation rate Not applicable

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not flammable

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not applicable

Vapor density Not applicable

Solubility(ies)

Solubility (water) Negligible in water. Partially soluble in toluene and xylene.

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable
Decomposition temperature	> 392 °F (> 200 °C)
Viscosity	Not applicable
Other information	
Oxidizing properties	No information available.
Percent volatile	0 % estimated
Softening point	176 - 266 °F (80 - 130 °C)
Specific gravity	1 - 1.2

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Stable under normal storage conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Imaging Drum: Exposure to light
Incompatible materials	Strong oxidizers
Hazardous decomposition products	Carbon monoxide and carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Contact with skin may result in mild irritation.
Eye contact	Contact with eyes may result in mild irritation.
Ingestion	Ingestion is not a likely route of exposure.
Symptoms related to the physical, chemical and toxicological characteristics	Not available.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
Carbon black (CAS 1333-86-4)		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	
Respiratory sensitization	Based on available data, the classification criteria are not met.
Skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium) Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met. Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Amorphous silica (CAS 7631-86-9)	3 Not classifiable as to carcinogenicity to humans.

Carbon black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.
Further information	Complete toxicity data are not available for this specific formulation Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological information

Ecotoxicity LC50: > 100 mg/l, Fish, 96.00 Hours

Product		Species	Test Results
CE400A-X-XC-YC			
Aquatic			
Fish	LC50	Fish	> 100 mg/l, 96 Hours

Persistence and degradability	Not available.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Finely dispersed particles may form explosive mixtures in air. Dispose of in compliance with federal, state, and local regulations.

HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport information

Further information Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

15. Regulatory information

US federal regulations US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE [<= 10 MICROMETERS]) (CAS 1333-86-4)	Listed: February 21, 2003
TITANIUM DIOXIDE (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE) (CAS 13463-67-7)	Listed: September 2, 2011

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Carbon black (CAS 1333-86-4)
Titanium dioxide (CAS 13463-67-7)

Regulatory information All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

16. Other information, including date of preparation or last revision

Issue date 18-Sep-2014

Revision date 07-Sep-2018

Version # 05

Other information This SDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

Disclaimer This Safety Data Sheet document is provided without charge to customers of HP. Data is the most current known to HP at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

This safety data sheet is meant to convey information about HP inks (toners) provided in HP Original ink (toner) supplies. If our Safety Data Sheet has been provided to you with a refilled, remanufactured, compatible or other non-HP Original supply please be aware that the information contained herein was not meant to convey information about such products and there could be considerable differences from information in this document and the safety information for the product you purchased. Please contact the seller of the refilled, remanufactured or compatible supplies for applicable information, including information on personal protective equipment, exposure risks and safe handling guidance. HP does not accept refilled, remanufactured or compatible supplies in our recycling programs.

Revision information Fire-fighting measures: Specific hazards arising from the chemical
Accidental release measures: Methods and materials for containment and cleaning up
Toxicological information: Eye contact
Toxicological information: Ingestion
Toxicological information: Inhalation
Toxicological information: Skin contact
Other information, including date of preparation or last revision: Disclaimer

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Identification of the preparation HP LaserJet C8061A-D-X-XC Print Cartridge

Product use This product is a toner preparation that is used in HP LaserJet 4100/4100mfp/4101mfp series printers.

Version # 13

Revision date 22-Jul-2010

Company identification

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Acute health effects

Skin contact Unlikely to cause skin irritation.

Eye contact May cause transient slight irritation

Inhalation Minimal respiratory tract irritation may occur with exposure to large amounts of toner dust.

Ingestion Low acute toxicity. Ingestion is a minor route of entry for intended use of this product.

Potential health effects

Routes of exposure Potential routes of exposure under normal use conditions are skin, eye contact and inhalation.

Ingestion is not expected to be a primary route of exposure for this product under normal use conditions.

Chronic health effects Prolonged inhalation of excessive amounts of any dust may cause lung damage. Use of this product as intended does not result in inhalation of excessive amounts of dust.

Carcinogenicity None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP, OSHA or ACGIH.

Other information This product is not classified as hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.

This preparation contains no component classified as Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) as defined under Regulation (EC) 1907/2006.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Iron oxide	1317-61-9	< 50
Styrene acrylate copolymer	Trade Secret	< 50

4. First Aid Measures

First aid procedures

Eye contact Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.

Skin contact	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation	Move person to fresh air immediately. If irritation persists, consult a physician.
Ingestion	Rinse mouth with water. Drink one to two glasses of water. If symptoms occur, consult a physician.

5. Fire Fighting Measures

Flammable properties	Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air.
Extinguishing media	
Suitable extinguishing media	CO2, water, or dry chemical
Unsuitable extinguishing media	None known.
Protection of firefighters	
Protective equipment and precautions for firefighters	If fire occurs in the printer, treat as an electrical fire.
Specific methods	None established.
Hazardous combustion products	Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions	Minimize dust generation and accumulation.
Environmental precautions	Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.
Other information	Slowly vacuum or sweep the material into a bag or other sealed container. If a vacuum is used, the motor must be rated as dust explosion-proof. Clean remainder with a damp cloth or vacuum cleaner. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

Handling	Keep out of the reach of children. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Keep away from excessive heat, sparks, and open flames.
Storage	Keep out of the reach of children. Keep tightly closed and dry. Store away from strong oxidizers. Store at room temperature.

8. Exposure Controls / Personal Protection

Exposure guidelines	USA OSHA (TWA/PEL): 15 mg/m3 (Total Dust), 5 mg/m3 (Respirable Fraction) ACGIH (TWA/TLV): 10 mg/m3 (Inhalable Particulate), 3 mg/m3 (Respirable Particulate)
Engineering controls	Use in a well ventilated area.
Personal protective equipment	
General	No personal respiratory protective equipment required under normal conditions of use.

9. Physical & Chemical Properties

Appearance	Fine powder
Color	Not available.
Odor	Slight plastic odor
Odor threshold	Not available.
Physical state	Liquid
Form	solid
pH	Not applicable
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not applicable

Flash point	Not applicable
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not flammable
Vapor pressure	Not applicable
Vapor density	Not available.
Specific gravity	1.5 (H2O = 1)
Relative density	Not available.
Solubility (water)	Negligible in water. Partially soluble in toluene and xylene.
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available.
Softening point	212 °F (100 °C)
Viscosity	Not applicable
VOC	Not available.
Other information	Decomposition temperature: > 200 ° C

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Imaging Drum: Exposure to light
Incompatible materials	Strong oxidizers
Hazardous decomposition products	Carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Oral toxicity	LD50/oral/rat >2000 mg/kg; Not harmful. (OECD 401). Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Carcinogenicity	None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP or OSHA.
Inhalation toxicity	LC50:inh/rat >5 mg/L/4 hrs., Not harmful. (OECD 403) Not classified for acute inhalation toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Serious eye damage/eye irritation	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Skin sensitization	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Chronic toxicity	No information available.
Sensitization	Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).
Mutagenicity	Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium)
Reproductivity	Not classified as toxic according to EU Directive 67/548/EEC and as amended, California Prop. 65, and DFG (Germany).
Further information	Complete toxicity data are not available for this specific formulation Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological Information

Ecotoxicity	LL50: 1000 mg/l, Rainbow Trout, 96.00 Hours
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Finely dispersed particles may form explosive mixtures in air. Dispose of in compliance with federal, state, and local regulations. HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport Information

Further information 10 or more of these cartridges shipped together in a single package (e.g., box, container), by air, are regulated as a magnetized material. These requirements do not apply to single or dual pack cartridges contained in an original HP package and shrink wrapped on a pallet for shipment by air.

DOT

Not regulated as dangerous goods.

IATA

Basic shipping requirements:

Proper shipping name Magnetized Material
UN number 2807

IMDG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

CERCLA (Superfund) reportable quantity

None

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical No

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

16. Other Information

Other information This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

HMIS® ratings Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 1
Instability: 0

Disclaimer This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

Issue date	22-Jul-2010
Manufacturer information	Hewlett-Packard Company 11311 Chinden Boulevard Boise, ID 83714 USA (Direct) 1-503-494-7199 (Toll-free within the US) 1-800-457-4209

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Identification of the preparation HP LaserJet CC364A-X-XC-XD Print Cartridge

Product use This product is a toner preparation that is used in HP LaserJet P4014 / P4015 / P4515 series printers.

Version # 06

Revision date 03-Aug-2010

Company identification

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Acute health effects

Skin contact Unlikely to cause skin irritation.

Eye contact May cause transient slight irritation

Inhalation Minimal respiratory tract irritation may occur with exposure to large amounts of toner dust.

Ingestion Low acute toxicity. Ingestion is a minor route of entry for intended use of this product.

Potential health effects

Routes of exposure Potential routes of exposure under normal use conditions are skin, eye contact and inhalation.

Ingestion is not expected to be a primary route of exposure for this product under normal use conditions.

Chronic health effects Prolonged inhalation of excessive amounts of any dust may cause lung damage. Use of this product as intended does not result in inhalation of excessive amounts of dust.

Carcinogenicity None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP, OSHA or ACGIH.

Other information This product is not classified as hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.

This preparation contains no component classified as Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) as defined under Regulation (EC) 1907/2006.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Polyester resin	Trade Secret	< 55
Iron oxide	1317-61-9	< 50
Amorphous silica	7631-86-9	< 2

4. First Aid Measures

First aid procedures

Eye contact Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.

Skin contact	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation	Move person to fresh air immediately. If irritation persists, consult a physician.
Ingestion	Rinse mouth with water. Drink one to two glasses of water. If symptoms occur, consult a physician.

5. Fire Fighting Measures

Flammable properties	Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air.
Extinguishing media	
Suitable extinguishing media	CO_2, water, or dry chemical
Unsuitable extinguishing media	None known.
Protection of firefighters	
Protective equipment and precautions for firefighters	If fire occurs in the printer, treat as an electrical fire.
Specific methods	None established.
Hazardous combustion products	Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions	Minimize dust generation and accumulation.
Environmental precautions	Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.
Other information	Slowly vacuum or sweep the material into a bag or other sealed container. If a vacuum is used, the motor must be rated as dust explosion-proof. Clean remainder with a damp cloth or vacuum cleaner. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

Handling	Keep out of the reach of children. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Keep away from excessive heat, sparks, and open flames.
Storage	Keep out of the reach of children. Store at room temperature. Keep tightly closed and dry. Store away from strong oxidizers.

8. Exposure Controls / Personal Protection

Exposure guidelines	USA OSHA (TWA/PEL): 15 mg/m3 (Total Dust), 5 mg/m3 (Respirable Fraction) ACGIH (TWA/TLV): 10 mg/m3 (Inhalable Particulate), 3 mg/m3 (Respirable Particulate) Amorphous silica: USA OSHA (TWA/PEL): 20 mppcf 80 (mg/m3)/%SiO_2, ACGIH (TWA/TLV): 10 mg/m3
Engineering controls	Use in a well ventilated area.
Personal protective equipment	
General	No personal respiratory protective equipment required under normal conditions of use.

9. Physical & Chemical Properties

Appearance	Fine powder
Color	Black.
Odor	Slight plastic odor
Odor threshold	Not available.
Physical state	Solid
Form	solid
pH	Not applicable
Melting point	Not available.

Freezing point	Not available.
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not flammable
Vapor pressure	Not applicable
Vapor density	Not available.
Specific gravity	1.4 (H2O = 1)
Relative density	Not available.
Solubility (water)	Negligible in water. Partially soluble in toluene and xylene.
Auto-ignition temperature	No data available
Decomposition temperature	Not available.
Softening point	212 - 302 °F (100 - 150 °C)
Viscosity	Not applicable
Percent volatile	Negligible
VOC	Not applicable
Other information	Decomposition temperature: > 200 ° C

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Imaging Drum: Exposure to light
Incompatible materials	Strong oxidizers
Hazardous decomposition products	Carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Oral toxicity	LD50/oral/rat >2000 mg/kg; Not harmful. (OECD 401). Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Carcinogenicity	Not a known or suspected carcinogen according to any IARC Monograph, NTP, OSHA Regulations (USA), EU Directive, or Proposition 65 (California).
Inhalation toxicity	No information available. Not classified for acute inhalation toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Serious eye damage/eye irritation	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Skin sensitization	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Chronic toxicity	No information available.
Sensitization	Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).
Mutagenicity	Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium)
Reproductivity	Not classified as toxic according to EU Directive 67/548/EEC and as amended, California Prop. 65, and DFG (Germany).
Further information	Complete toxicity data are not available for this specific formulation Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological Information

Ecotoxicity	LL50: 1000 mg/l, Rainbow Trout, 96.00 Hours
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions

Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Finely dispersed particles may form explosive mixtures in air. Dispose of in compliance with federal, state, and local regulations.

HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport Information

Further information

22 or more of these cartridges shipped together in a single package (e.g., box, container), by air, are regulated as a magnetized material. These requirements do not apply to single or dual pack cartridges contained in an original HP package and shrink wrapped on a pallet for shipment by air.

DOT

Not regulated as dangerous goods.

IATA

Basic shipping requirements:

Proper shipping name	Magnetized Material
UN number	2807

IMDG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

CERCLA (Superfund) reportable quantity

None

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	No

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No

Regulatory information

All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

16. Other Information

Other information

This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer	This [Material] Safety Data Sheet is provided without charge to customers of Hewlett-Packarc Company. Data is the most current known to Hewlett-Packard Company at the time of preparation of this (M)SDS and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application.
Issue date	03-Aug-2010
This data sheet contains changes from the previous version in section(s):	9. Physical & Chemical Properties: Color Transport Information: Agency Name and Packaging Type/Transport Mode Selection 14. Transport Information: Further information
Manufacturer information	Hewlett-Packard Company 11311 Chinden Boulevard Boise, ID 83714 USA (Direct) 1-503-494-7199 (Toll-free within the US) 1-800-457-4209

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Identification of the preparation HP LaserJet Q1338A-AC-D Print Cartridge

Product use This product is a toner preparation that is used in HP LaserJet 4200/4200L series printers

Version # 10

Revision date 15-Jul-2010

Company identification

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Acute health effects

Skin contact Unlikely to cause skin irritation.

Eye contact May cause transient slight irritation

Inhalation Minimal respiratory tract irritation may occur with exposure to large amounts of toner dust.

Ingestion Low acute toxicity. Ingestion is a minor route of entry for intended use of this product.

Potential health effects

Routes of exposure Potential routes of exposure under normal use conditions are skin, eye contact and inhalation.

Ingestion is not expected to be a primary route of exposure for this product under normal use conditions.

Chronic health effects Prolonged inhalation of excessive amounts of any dust may cause lung damage. Use of this product as intended does not result in inhalation of excessive amounts of dust.

Carcinogenicity None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP, OSHA or ACGIH.

Other information This product is not classified as hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.

This preparation contains no component classified as Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) as defined under Regulation (EC) 1907/2006.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Iron oxide	1317-61-9	< 50
Polyester resin	Trade Secret	< 50
Amorphous silica	7631-86-9	< 2

4. First Aid Measures

First aid procedures

Eye contact Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.

Skin contact	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation	Move person to fresh air immediately. If irritation persists, consult a physician.
Ingestion	Rinse mouth with water. Drink one to two glasses of water. If symptoms occur, consult a physician.

5. Fire Fighting Measures

Flammable properties	Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air.
Extinguishing media	
Suitable extinguishing media	CO_2, water, or dry chemical
Unsuitable extinguishing media	None known.
Protection of firefighters	
Protective equipment and precautions for firefighters	If fire occurs in the printer, treat as an electrical fire.
Specific methods	None established.
Hazardous combustion products	Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions	Minimize dust generation and accumulation.
Environmental precautions	Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.
Other information	Slowly vacuum or sweep the material into a bag or other sealed container. If a vacuum is used, the motor must be rated as dust explosion-proof. Clean remainder with a damp cloth or vacuum cleaner. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

Handling	Keep out of the reach of children. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Keep away from excessive heat, sparks, and open flames.
Storage	Keep out of the reach of children. Store at room temperature. Store away from strong oxidizers. Keep tightly closed and dry.

8. Exposure Controls / Personal Protection

Exposure guidelines	USA OSHA (TWA/PEL): 15 mg/m3 (Total Dust), 5 mg/m3 (Respirable Fraction) ACGIH (TWA/TLV): 10 mg/m3 (Inhalable Particulate), 3 mg/m3 (Respirable Particulate) Amorphous silica: USA OSHA (TWA/PEL): 20 mppcf 80 (mg/m3)/%SiO_2, ACGIH (TWA/TLV): 10 mg/m3
Engineering controls	Use in a well ventilated area.
Personal protective equipment	
General	No personal respiratory protective equipment required under normal conditions of use.

9. Physical & Chemical Properties

Appearance	Fine powder
Color	Not available.
Odor	Slight plastic odor
Odor threshold	Not available.
Physical state	Liquid
Form	solid
pH	Not applicable
Melting point	Not available.

Freezing point	Not available.
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not flammable
Vapor pressure	Not applicable
Vapor density	Not available.
Specific gravity	1.4 (H2O = 1)
Relative density	Not available.
Solubility (water)	Negligible in water. Partially soluble in toluene and xylene.
Auto-ignition temperature	No data available
Decomposition temperature	Not available.
Softening point	212 °F (100 °C)
Viscosity	Not applicable
VOC	Not available.
Other information	Decomposition temperature: > 200 °C

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Imaging Drum: Exposure to light
Incompatible materials	Strong oxidizers
Hazardous decomposition products	Carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Oral toxicity	LD50/oral/rat >2000 mg/kg; Not harmful. (OECD 401). Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Carcinogenicity	Not a known or suspected carcinogen according to any IARC Monograph, NTP, OSHA Regulations (USA), EU Directive, or Proposition 65 (California).
Inhalation toxicity	No information available. Not classified for acute inhalation toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Serious eye damage/eye irritation	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Skin sensitization	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Chronic toxicity	No information available.
Sensitization	Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).
Mutagenicity	Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium)
Reproductivity	Not classified as toxic according to EU Directive 67/548/EEC and as amended, California Prop. 65, and DFG (Germany).
Further information	Complete toxicity data are not available for this specific formulation Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological Information

Ecotoxicity	LL50: 1000 mg/l, Rainbow Trout, 96.00 Hours
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions

Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Finely dispersed particles may form explosive mixtures in air. Dispose of in compliance with federal, state, and local regulations.

HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport Information

Further information

18 or more of these cartridges shipped together in a single package (e.g., box, container), by air, are regulated as a magnetized material. These requirements do not apply to single or dual pack cartridges contained in an original HP package and shrink wrapped on a pallet for shipment by air.

DOT

Not regulated as dangerous goods.

IATA

Basic shipping requirements:

Proper shipping name	Magnetized Material
UN number	2807

IMDG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

CERCLA (Superfund) reportable quantity

None

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	No

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No

Regulatory information

All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

16. Other Information

Other information

This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer	This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.
Issue date	15-Jul-2010
This data sheet contains changes from the previous version in section(s):	11. Toxicological Information: Further information Transport Information: Agency Name and Packaging Type/Transport Mode Selection 14. Transport Information: Further information
Manufacturer information	Hewlett-Packard Company 11311 Chinden Boulevard Boise, ID 83714 USA (Direct) 1-503-494-7199 (Toll-free within the US) 1-800-457-4209

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Identification of the preparation HP LaserJet Q5942A-X-XC-YC-XD Print Cartridge

Product use This product is a toner preparation that is used in HP LaserJet 4240/4250/4350 series printers.

Version # 15

Revision date 04-Feb-2013

Company identification

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Acute health effects

Skin contact Unlikely to cause skin irritation.

Eye contact May cause transient slight irritation

Inhalation Minimal respiratory tract irritation may occur with exposure to large amounts of toner dust.

Ingestion Low acute toxicity. Ingestion is a minor route of entry for intended use of this product.

Potential health effects

Routes of exposure Potential routes of exposure under normal use conditions are skin, eye contact and inhalation.

Ingestion is not expected to be a primary route of exposure for this product under normal use conditions.

Chronic health effects Prolonged inhalation of excessive amounts of any dust may cause lung damage. Use of this product as intended does not result in inhalation of excessive amounts of dust.

Carcinogenicity None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP, OSHA or ACGIH.

Other information This product is not classified as hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.

This preparation contains no component classified as Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) as defined under Regulation (EC) 1907/2006.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Iron oxide	1317-61-9	< 50
Polyester resin	Trade Secret	< 50
Amorphous silica	7631-86-9	< 3

4. First Aid Measures

First aid procedures

Eye contact Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.

Skin contact	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation	Move person to fresh air immediately. If irritation persists, consult a physician.
Ingestion	Rinse mouth with water. Drink one to two glasses of water. If symptoms occur, consult a physician.
General advice	No additional information

5. Fire Fighting Measures

Flammable properties	Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air.
Extinguishing media	
Suitable extinguishing media	CO_2, water, or dry chemical
Unsuitable extinguishing media	None known.
Protection of firefighters	
Protective equipment and precautions for firefighters	If fire occurs in the printer, treat as an electrical fire.
Specific methods	None established.
Hazardous combustion products	Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions	Minimize dust generation and accumulation.
Environmental precautions	Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.
Other information	Slowly vacuum or sweep the material into a bag or other sealed container. If a vacuum is used, the motor must be rated as dust explosion-proof. Clean remainder with a damp cloth or vacuum cleaner. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

Handling	Keep out of the reach of children. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Keep away from excessive heat, sparks, and open flames.
Storage	Keep out of the reach of children. Keep tightly closed and dry. Store away from strong oxidizers. Store at room temperature.

8. Exposure Controls / Personal Protection

Exposure guidelines	USA OSHA (TWA/PEL): 15 mg/m3 (Total Dust), 5 mg/m3 (Respirable Fraction) ACGIH (TWA/TLV): 10 mg/m3 (Inhalable Particulate), 3 mg/m3 (Respirable Particulate) Amorphous silica: USA OSHA (TWA/PEL): 20 mppcf 80 (mg/m3)/%SiO_2, ACGIH (TWA/TLV): 10 mg/m3
Engineering controls	Use in a well ventilated area.
Personal protective equipment	
General	No personal respiratory protective equipment required under normal conditions of use.

9. Physical & Chemical Properties

Appearance	Fine powder
Color	Black.
Odor	Slight plastic odor
Odor threshold	Not available.
Physical state	Solid
Form	solid
pH	Not applicable

Melting point	Not available.
Freezing point	Not available.
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not flammable
Vapor pressure	Not applicable
Vapor density	Not available.
Specific gravity	1.4 - 1.8 (H2O = 1)
Relative density	Not available.
Solubility (water)	Negligible in water. Partially soluble in toluene and xylene.
Auto-ignition temperature	No data available
Decomposition temperature	> 392 °F (> 200 °C)
Softening point	212 - 302 °F (100 - 150 °C)
Viscosity	Not applicable
Percent volatile	0 % estimated
VOC	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Imaging Drum: Exposure to light
Incompatible materials	Strong oxidizers
Hazardous decomposition products	Carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Oral toxicity	LD50/oral/rat >2000 mg/kg; Not harmful. (OECD 401). Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Carcinogenicity	Not a known or suspected carcinogen according to any IARC Monograph, NTP, OSHA Regulations (USA), EU Directive, or Proposition 65 (California).
Inhalation toxicity	No information available. Not classified for acute inhalation toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Serious eye damage/eye irritation	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Chronic toxicity	No information available.
Sensitization	Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).
Mutagenicity	Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium)
Reproductivity	Not classified as toxic according to EU Directive 67/548/EEC and as amended, California Prop. 65, and DFG (Germany).
Further information	Complete toxicity data are not available for this specific formulation Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological Information

Ecotoxicity	LL50: > 1000 mg/l, Rainbow Trout, 96.00 Hours
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Finely dispersed particles may form explosive mixtures in air. Dispose of in compliance with federal, state, and local regulations.

HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport Information

Further information 14 or more of these cartridges shipped together in a single package (e.g., box, container), by air, are regulated as a magnetized material. These requirements do not apply to single or dual pack cartridges contained in an original HP package and shrink wrapped on a pallet for shipment by air.

DOT

Not regulated as dangerous goods.

IATA

Basic shipping requirements:

Proper shipping name Magnetized Material
UN number 2807

IMDG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

None

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical No

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

State regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

Regulatory information All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

16. Other Information

Other information This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

HMIS® ratings
Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 1
Flammability: 1
Instability: 0

Disclaimer This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

Issue date 04-Feb-2013

Manufacturer information
Hewlett-Packard Company
11311 Chinden Boulevard
Boise, ID 83714 USA
(Direct) 1-503-494-7199
(Toll-free within the US) 1-800-457-4209

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Identification of the preparation HP Color LaserJet Q5952A-AC Yellow Print Cartridge

Product use This product is a yellow toner preparation that is used in HP Color LaserJet 4700 series printers

Version # 05

Revision date 25-Jan-2013

Company identification

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Acute health effects

Skin contact Unlikely to cause skin irritation.

Eye contact May cause transient slight irritation

Inhalation Minimal respiratory tract irritation may occur with exposure to large amounts of toner dust.

Ingestion Low acute toxicity. Ingestion is a minor route of entry for intended use of this product.

Potential health effects

Routes of exposure Potential routes of exposure under normal use conditions are skin and eye contact; and inhalation

Ingestion is not expected to be a primary route of exposure for this product under normal use conditions.

Chronic health effects Prolonged inhalation of excessive amounts of any dust may cause lung damage. Use of this product as intended does not result in inhalation of excessive amounts of dust.

Carcinogenicity None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP, OSHA or ACGIH.

Other information This product is not classified as hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.

This preparation contains no component classified as Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) as defined under Regulation (EC) 1907/2006.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Styrene acrylate copolymer	Trade Secret	< 85
Wax	Trade Secret	< 15
Pigment	Trade Secret	< 5
Amorphous silica	7631-86-9	< 2

4. First Aid Measures

First aid procedures

Eye contact	Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.
Skin contact	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation	Move person to fresh air immediately. If irritation persists, consult a physician.
Ingestion	Rinse mouth out with water. Drink one to two glasses of water. If symptoms occur, consult a physician.

General advice No additional information

5. Fire Fighting Measures

Flammable properties Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air.

Extinguishing media

Suitable extinguishing media	CO_2, water, or dry chemical
Unsuitable extinguishing media	None known.

Protection of firefighters

Protective equipment and precautions for firefighters	If fire occurs in the printer, treat as an electrical fire.

Specific methods None established.

Hazardous combustion products Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions Minimize dust generation and accumulation.

Environmental precautions Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.

Other information Slowly vacuum or sweep the material into a bag or other sealed container. Clean remainder with a damp cloth or vacuum cleaner. If a vacuum is used, the motor must be rated as dust explosion-proof. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

Handling Keep out of the reach of children. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Keep away from excessive heat, sparks, and open flames.

Storage Keep out of the reach of children. Store at room temperature. Store away from strong oxidizers. Keep tightly closed and dry.

8. Exposure Controls / Personal Protection

Exposure guidelines USA OSHA (TWA/PEL): 15 mg/m3 (Total Dust), 5 mg/m3 (Respirable Fraction)

ACGIH (TWA/TLV): 10 mg/m3 (Inhalable Particulate), 3 mg/m3 (Respirable Particulate)

Amorphous silica: USA OSHA (TWA/PEL): 20 mppcf 80 (mg/m3)/%SiO_2, ACGIH (TWA/TLV): 10 mg/m3

Engineering controls Use in a well ventilated area.

Personal protective equipment

General	No personal respiratory protective equipment required under normal conditions of use.

9. Physical & Chemical Properties

Appearance Fine powder

Color Yellow

Odor Slight plastic odor

Odor threshold	Not available.
Physical state	Solid
Form	solid
pH	Not applicable
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not flammable
Vapor pressure	Not applicable
Vapor density	Not available.
Specific gravity	1 - 1.2 (H2O = 1)
Relative density	Not available.
Solubility (water)	Negligible in water. Partially soluble in toluene and xylene.
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available.
Softening point	212 - 302 °F (100 - 150 °C)
Viscosity	Not applicable
Percent volatile	0 % estimated
VOC	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Imaging Drum: Exposure to light
Incompatible materials	Strong oxidizers
Hazardous decomposition products	Carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Oral toxicity	LD50/oral/rat >2000 mg/kg; (OECD 401); Not harmful.. Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Carcinogenicity	Not a known or suspected carcinogen according to any IARC Monograph, NTP, OSHA Regulations (USA), EU Directive, or Proposition 65 (California).
Inhalation toxicity	No information available. Not classified for acute inhalation toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Serious eye damage/eye irritation	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
Chronic toxicity	No information available.
Sensitization	Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).
Mutagenicity	Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium)
Reproductivity	Not classified as toxic according to EU Directive 67/548/EEC and as amended, California Prop. 65, and DFG (Germany).
Further information	Complete toxicity data are not available for this specific formulation Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological Information

Ecotoxicity LL50: > 1000 mg/l, Rainbow Trout, 96.00 Hours

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Finely dispersed particles may form explosive mixtures in air. Dispose of in compliance with federal, state, and local regulations.

HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport Information

Further information Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

15. Regulatory Information

US federal regulations US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

None

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical No

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

State regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

Regulatory information All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

16. Other Information

Other information

This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer

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Issue date

25-Jan-2013

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Alternate Trade Names
9. Physical & Chemical Properties: Color
9. Physical & Chemical Properties: Other information
11. Toxicological Information: Further information
14. Transport Information: Further information

Manufacturer information

Hewlett-Packard Company
11311 Chinden Boulevard
Boise, ID 83714 USA
(Direct) 1-503-494-7199
(Toll-free within the US) 1-800-457-4209

Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name:
Type HP™ Cleaner/Degreaser Aerosol

Product ID numbers: HPY-12

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Electrical cleaning

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Skin Sens 1	H317
Flam Aerosol 2	H223, H229

2.2 Label elements

This product is intended for consumer use and is labeled according to CPSC guidelines and not to GHS guidelines listed below. It is safe for consumers and other users under normal and reasonably foreseeable use. The SDS contains valuable information for industrial workplace conditions.

Contains: Hydrocarbon Solvent, Citrus Terpenes

Pictograms:

Signal word: Warning

Hazard Statements:

H223	Flammable aerosol
H229	Pressurized container, may burst if heated
H317	May cause an allergic skin reaction

Precautionary Statements:

P210	Keep away from flames and hot surfaces. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing fumes.
P280	Wear protective gloves.
P302 + P352	IF ON SKIN: Wash with plenty of water.

P333 + P313	If skin irritation or rash occurs: Get medical advice.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501	Dispose of contents/container in accordance with local and national regulations.
Notes:	Aspiration classification not applied due to the physical form of the product.

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

Component	CAS #	EC #	Wt. %
Petroleum distillates, hydrotreated light	64742-47-8	265-149-8	< 100
d-Limonene	5989-27-5	227-813-5	< 10
Carbon Dioxide	124-38-9	204-6969-9	< 5

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: If eye irritation from exposure to vapors develops, move to fresh air. Flush eyes with clean water. If irritation persists, seek medical attention. For direct eye contact, flush with large quantity of water for 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.

Inhalation (Breathing): If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.

Ingestion (Swallowing): Do not induce vomiting or give anything by mouth. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

Aspiration hazard. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. This route not expected in aerosol package.

5. Firefighting Measures

5.1 Extinguishing media:

Carbon dioxide, water fog, dry chemical or foam.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition and by-products:

Burning generates CO, CO_2 and smoke. Smoke may be acrid and fumes irritating.

5.3 Advice for firefighters

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Use water spray to cool fire exposed containers. Aerosol cans can build up pressure and explode when exposed to temperatures greater than 122°F (50°C).

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use only non-sparking tools to clean up the spill. For a spill in a confined space, provide mechanical ventilation to disperse or exhaust vapors. For emergency responders: use respiratory protection: half-face or full-face respirator with filter(s) for organic vapor for spills in a confined space. Work gloves that are resistant to aromatic hydrocarbons are recommended. Chemical goggles are recommended if splashes or contact with eyes is possible. For small

spills: normal antistatic work clothes are usually adequate.

6.2 Environmental precautions:

Avoid release to the environment. Dyke the spill to prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods materials for containment and cleaning up:

Absorb spill with sand or absorbents. Collect as much of the spilled material as possible using non-sparking tools and transfer to a container. Seal the container. Remember, adding an absorbent material does not change the toxicity or flammability hazard.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing vapors or spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Do not expose container to direct sunlight or temperatures above 122°F (50°C). Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store away from acids and oxidizing agents.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Petroleum Distillates, hydrotreated light (64742-47-8)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
Manufacturer, RCP* TWA	1200 mg/m^3	--
USA, ACGIH TWA	Not established	Not established
USA, OSHA PEL	2000 mg/m^3 , 500 ppm (as petroleum distillates (naphtha))	--
British Columbia	200 mg/m^3	--
Alberta, Quebec, Yukon, Saskatchewan, Ontario*	Not established	--

D-Limonene (5989-27-5)

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
USA ACGIH TWA	Not established	Not established
USA OSHA PEL	Not established	Not established
Alberta, Quebec, Yukon, British Columbia, Saskatchewan, Ontario*	Not established	Not established

** reciprocal calculation procedure for total hydrocarbons*

*** Manitoba, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island are all based on the current ACGIH TLVs. New Brunswick is based on an older version ACGIH. Nunavet and Northwest Territories are based heavily on current ACGIH TLVs.*

8.2 Exposure controls

Respiratory protection:

Normal ventilation is adequate. If exposure exceeds recommended limits, respirator protection is recommended. Use a respirator or gas mask with cartridges for organic vapors (NIOSH or CE approved) with

particulate pre-filter, P100 or AP2.

Protective gloves:

For repeated or prolonged skin contact, the use of impermeable gloves is recommended to prevent drying and possible irritation.

Suggested Material:	Nitrile Rubber
Suggested Thickness:	For short term contact (<15 minutes), splashes use 0.2 mm. For full contact use 0.4 mm

Exact break-through time has not been determined. Guidance is based on similar chemistry/material. Maximum wearing time should be determined based on 50 % of the penetration time determined by EN 374 part III.

Eye protection:

Safety glasses recommended.

Other protective equipment:

It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. Physical and Chemical

9.1 Information of basic physical and chemical properties

Appearance:	Clear, colorless liquid with a very light citrus scent in aerosol package.
Odor threshold:	Not available
pH:	Does not apply
Freezing point:	<-58°F (<-50°C)
Boiling point:	365°F (185°C) Initial
Flash point:	>140°F (>60.5°C), Closed Cup (PMCC)
Evaporation rate:	<0.1 (n-butyl acetate = 1)
Flammability (solid, gas):	Not applicable to liquids
Upper/lower flammability or explosive limits:	LEL = 0.7% UEL = 6.1%-7.0%
Vapor pressure:	<1 mm Hg < 134 Pa @ 20°C
Vapor density (Air = 1):	> 1.0
Specific gravity (H_2O = 1):	0.79
Solubility in water:	Nil
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available.

9.2 Other Information

Volatiles (Weight %):	100%
VOC Content:	790 g/l

10. Stability and Reactivity

10.1 Reactivity:

See remaining headings in Section 10.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

None known.

10.4 Conditions to avoid:

Avoid heat, flame, and sparks.

10.5 Incompatible materials :

Strong oxidizing agents.

10.6 Hazardous decomposition products:

Carbon dioxide, carbon monoxide.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact may cause eye irritation. This irritation is minimal and expected to be transient.

Skin contact:

Prolonged or repeated skin exposure can remove oils, causing redness, drying and cracking. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material.

Irritation and Sensitization Potential:

Product may be irritating to skin and eyes. It is not a sensitizer.

Inhalation (Breathing):

Concentrated petroleum solvent vapors may cause irritation of the nose and throat. Prolonged exposure to excessively high vapor concentrations can result in central nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue). Persons with impaired lung function may experience additional breathing difficulties due to the irritant properties of this material.

Ingestion:

Ingestion of large quantities may cause irritation of the digestive tract, nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).

Toxicity to Animals:

Petroleum distillates, hydrotreated light:	LD_{50} (oral rat) >5000 mg/kg
	LD_{50} (dermal rabbit) >2000 mg/kg
	LC_{50} (inhl rat) >4.3mg/L, 4 hours
d-Limonene:	LD_{50} (oral rat) >5000 mg/kg
	LD_{50} (dermal rabbit) 5000 mg/kg
	RD_{50} 1000 ppm

Aspiration hazard

May be fatal if swallowed and enters airways. Not expected with aerosol package.

Chronic Exposure:

Reproductive Toxicity:	Not available.
Mutagenicity:	Not available.
Teratogenicity:	Not available.
Specific Target Organ Toxicity (STOT)	No end point data.
Toxicologically Synergistic Products:	Not available.
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.

12. Ecological Information

12.1 Toxicity:

Ecotoxicity:	No information available.
Aquatic Toxicity:	No information available.

12.2 Persistence and degradability: Expected to be biodegradable.

12.3 Bioaccumulation potential:	No information available
12.4 Mobility in soil:	No information available.
12.5 Results of PBT and vPvB Assessment:	This product is not, nor does it contain a substance that is a PBT or vPvB.
12.6 Other adverse effects:	None known.

13. Disposal Considerations

Dispose of product in accordance with National and Local Regulations.

14. Transport Information

UN Number:	1950
UN Proper shipping name:	AEROSOLS, Flammable, less than 1 liter each, Class 2.1, LTD QTY
Transport hazard class(es):	Class 9
Packing group:	Not Applicable
Environmental hazards:	None known
Special precautions:	None known
TDG:	Not Regulated
ICAO/IATA-DGR:	Consumer Commodity, ID 8000, Class 9, LTD QTY
IMDG:	UN 1950, AEROSOLS, Flammable, less than 1 liter each, Class 2.1, LTD QTY

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

USA Federal and State
All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting	**Acute**	**Chronic**	**Fire**	**Pressure**	**Reactive**
	No	No	Yes	No	No

	CERCLA/SARA Sec 302		SARA Sec. 313
Components	**Hazardous Substance RQ**	**EHS TPQ**	**Toxic Release**

Components are not affected by these Superfund regulations.

NFPA Ratings:	Health:	1
	Fire:	2
	Reactivity:	0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

California Proposition 65
WARNING: This product can expose you to benzene, ethylbenzene, cumene, and naphthalene which are known to the state of California to cause cancer, and toluene and benzene which are known to the State of California to cause birth defects and/or other reproductive harm. For more information, go to www.p65warnings.ca.gov.

European Union
Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list ≥ 0.1% SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Canada
All components are listed on the DSL inventory.

Australia
All components are listed on the AICS.
Hazardous according to criteria of NOHSC Australia.

15.2 Chemical Safety Assessment
No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:
OSHA = Occupational Safety and Health Administration
CLP = Classification, Labeling and Packaging Regulation
STOT = Specific Target Organ Toxicity
LD_{50} = Median Lethal Dose
DNEL = Derived No Effect Level
ACGIH = American Conference of Governmental Industrial Hygienists
TSCA = Toxic Substances Control Act (USA)
DSL = Domestic Substances List (Canada)
AICS = Australian Inventory of Chemical Substances

Revision Date:	September 24, 2018
Revision Number:	7
Supersedes:	September 13, 2017
Other:	Not Applicable
Indication of Changes:	Section 3, 15 updated; format updates and additional California Proposition 65 information. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

CANBERRA CORPORATION
SAFETY DATA SHEET

1. Identification

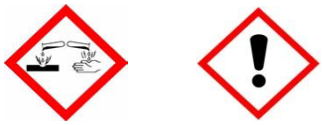
Product Identifier: HUSKY 704 RINSE FREE FLOOR STRIPPER
Application or recommended use: Floor finish remover
Restrictions on use: Do not use in any fashion not specified on the product label.
Manufacturer / supplier: Canberra Corporation
3610 N. Holland-Sylvania Rd.
Toledo, Ohio 43615 USA
Telephone: 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

2. Hazards Identification

GHS Classification: Classification of this mixture in accordance with paragraph (d) of §1910.1200.
Skin Corrosion/Irritation - Category 1C
Eye Damage/Eye Irritation - Category 1
STOT-SE - Category 3 (Respiratory Irritation)

Label Elements:

Symbol:



Signal word: **DANGER**
Hazard statements: Causes severe skin burns and serious eye damage.
May cause respiratory irritation.
Precautionary statements: Do not breathe mist/vapors/spray.
Wash hands, face and any skin contact thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Use only in a well-ventilated area.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
See 4. First-Aid Measures for specific treatment.
Store locked up in a well-ventilated place.
Keep container tightly closed.
Dispose of contents/container to an approved disposal facility.

Other Hazards: Harmful if swallowed.

3. Composition / Information on Ingredients

Chemical characterization: Amine solution, blended with solvents, detergents and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.

35 - 45% *2-Butoxyethanol	CAS 111-76-2, EINECS/ELINCS 203-905-0
5 - 10% Ethanolamine	CAS 141-43-5, EINECS/ELINCS 205-483-3

Other ingredients (> 1%):

> 40% Water	CAS 7732-18-5, EINECS/ELINCS 231-791-2

4. First-Aid Measures

Symptoms: Causes irritation or burning sensation. Causes severe skin burns and serious eye damage.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation: Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.
Skin Contact: Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

4. First-Aid Measures (cont.)

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration. Probable mucosal damage may contraindicate the use of gastric lavage.
Note to Physician: Treat exposed patients symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide or foam extinguishing agents. In case of fire, keep containers cooled with water spray.
Unsuitable Extinguishing Media: High pressure water jet. **Specific hazards in case of fire:** None known.
Special Fire Fighting Precautions: Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

6. Accidental Release Measures

Emergency Procedures: Depending on the extent of release, consider the need for emergency responders with adequate personal protective equipment for clean up, need for evacuation or restriction to access of spill area.
Personal Precautions: Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.
Environmental Precautions: Prevent spills from entering storm sewers/drains or contact with soil.
Clean up Methods: Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

7. Handling and Storage

Precautions for Safe Handling: Read label before use. Avoid contact with skin or eyes. Do not breathe mist/vapors. Wash hands, face and any skin contact thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, protective clothing, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor. Use only in a well-ventilated area.
Conditions for Safe Storage: Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store locked up in tightly closed, original container in a cool (10˚ - 30˚C), dry, well-ventilated area.
Incompatibility: Acids, oxidizers.

8. Exposure Controls / Personal Protection

Components with occupational exposure limits:

Component	Reference	TWA (8 hr)	PEL (8 hr)	STEL
2-Butoxyethanol	ACGIH	20 ppm		
	OSHA		50 ppm	
Ethanolamine	ACGIH	3 ppm		6 ppm
	OSHA		3 ppm	

Engineering Controls: Proper ventilation in accordance with good industrial hygiene should be provided.
Personal Protective Equipment
Respiratory: Respiratory protection is not necessary under normal conditions of use. If necessary to prevent exposure above occupational limits, use an approved cartridge style respirator.
Gloves: Use water impervious gloves (latex or neoprene rubber). No breakthrough time has been established.
Eye Protection: Chemical resistant goggles and face protection.
Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

9. Physical and Chemical Properties

Physical State - Liquid
Color - None
Odor - 2-Butoxyethanol
Odor Threshold - No data available
Boiling Point - 212°F
Decomposition temperature - No data available
Freezing Point - < 0°F
pH (Neat) - 12.5 - 13.5
pH (RTU) - 11.5 - 13.0
Relative Density - 0.985
Evaporation Rate - Similar to water

Auto-ignition temperature – No data available
Flash Point - > 200°F (ASTM D3278)
Flammability (solid, gas) - Not applicable
Flammability Limits - No data available
Partition coefficient - No data available
Solubility (Water) - Complete
Vapor Density - No data available
Vapor Pressure - No data available
Viscosity - Slightly viscous
% VOC - 40.8 (Excluding LVP material)

10. Stability and Reactivity

Reactivity: No specific reactivity test data is available. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Acids, oxidizers.
Chemical stability: This product is stable at ambient temperatures and pressures.
Conditions to avoid: Temperatures above 50°C or below 10°C. **Hazardous decomposition products:** None known.

11. Toxicological Information

Acute Toxicity: Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg//kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Corrosion	Category 1	Ingredient literature
Skin Damage/.Irritation	Corrosion	Category 1C	Ingredient literature

Summary: Skin and eye contact are most likely routes of exposure. Exposure causes skin burns and serious eye damage.

Subchronic/Chronic Toxicity:

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

Summary: Repeated or prolonged contact causes skin burns and eye damage.

Carcinogens - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA
Other data - No other toxicological information is available for this mixture.

12. Ecological Information

This material has not been tested for acute environmental effects.
Persistence and degradability: Material is not persistent. All organic components in this product are readily biodegradable.
Bio-accumulative potential: No evidence to suggest bio-accumulation will occur.
Mobility: Accidental spillage may lead to penetration of soil and groundwater. However, due to degradability, no evidence suggests this would cause adverse ecological effects. Material will raise pH of affected area.

13. Disposal Considerations

RCRA Class - D002. Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

14. Transport Information

Proper Shipping Name: UN3266, Corrosive Liquid, basic, inorganic, (Ethanolamine) **RQ** – N/A
Shipping emergency phone: 800-424-9300
Transport hazard class: 8 **Hazard Label:** Corrosive (When shipped as a Limited Quantity, labeling is not required.)
Packing Group: III **Emergency Guide No.:** 154 **Marine Pollutant:** No

15. Regulatory Information

Inventory status: All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

OSHA Hazard Communication Standard: This product meets the §1910.1200 definition of a "Hazardous Chemical".

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes	**Delayed (Chronic) Health Hazard**	No
Fire Hazard	No	**Reactive Hazard**	No
Sudden Release of Pressure Hazard	No		

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313
*****Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

Pennsylvania/New Jersey/Massachusetts Right to Know
See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

California Proposition 65: This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

16. Other information

Date issued: 31. 12. 2014 F704-001 Revision: N/A

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation

CANBERRA CORPORATION
SAFETY DATA SHEET

1. Identification

Product Identifier: HUSKY 800 NEUTRAL DISINFECTANT CLEANER
Application or recommended use: Concentrated hard surface disinfectant cleaner
Restrictions on use: Do not use in any fashion not specified on the product label.
Manufacturer / supplier: Canberra Corporation
3610 N. Holland-Sylvania Rd.
Toledo, Ohio 43615 USA
Telephone: 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

2. Hazards Identification

GHS Classification: Classification of this mixture in accordance with paragraph (d) of §1910.1200.
Skin Corrosion/Irritation - Category 2
Eye Damage/Irritation - Category 1

Label Elements:

Symbol:
Signal word: **DANGER**
Hazard statements: Causes skin irritation. Causes serious eye damage.
Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.
Wear protective gloves/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **Immediately call a POISON CENTER or doctor/physician.**
IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
See 4. First-Aid Measures for specific treatment.

Other Hazards: Harmful if swallowed.

3. Composition / Information on Ingredients

Chemical characterization: Concentrated mixture of water, detergents, germicides and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.

2.54%	Didecyl dimethyl ammonium chlorides	CAS 7173-51-5, EINECS/ELINCS 230-525-2
1.69%	$C_{12\text{-}16}$ Alkyl dimethybenzyl ammonium chlorides	CAS 68424-85-1, EINECS/ELINCS 264-151-6

Other ingredients (> 1%):

> 92%	Water	CAS 7732-18-5, EINECS/ELINCS 231-791-2

4. First-Aid Measures

Symptoms: Burning or irritation of affected areas. Causes skin irritation. Causes serious eye damage.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
Skin Contact: Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. If skin irritation occurs, get medical advice/attention.
Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration. Probable mucosal damage may contraindicate the use of gastric lavage. **Note to Physician:** Treat exposed patients symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Not applicable. Product is not a fire hazard.
Unsuitable Extinguishing Media: High pressure water jet. **Specific hazards in case of fire:** None known.
Special Fire Fighting Precautions: Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

6. Accidental Release Measures

Emergency Procedures: Depending on the extent of release, consider the need for restriction of access to spill area.
Personal Precautions: Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.
Environmental Precautions: Prevent spills from entering storm sewers/drains or contact with soil.
Clean up Methods: Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

7. Handling and Storage

Precautions for Safe Handling: Read label before use. Avoid contact with skin or eyes. Avoid breathing vapor or spray mist. Wash hands, face and any skin contact thoroughly after handling. Wear protective gloves, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.
Conditions for Safe Storage: Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10˚ - 30˚C), dry area. **Incompatibility:** Anionic detergents.

8. Exposure Controls / Personal Protection

Components with occupational exposure limits: None
Engineering Controls: Proper ventilation in accordance with good industrial hygiene should be provided.
Personal Protective Equipment
Respiratory: Respiratory protection is not necessary under normal conditions of use.
Gloves: Use water impervious gloves (latex or neoprene rubber). No breakthrough time has been established.
Eye Protection: Chemical resistant goggles or face protection.
Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

9. Physical and Chemical Properties

Physical State - Liquid
Color - Blue
Odor - Ocean breeze
Odor Threshold - No data available
Boiling Point - 212°F
Decomposition temperature - No data available
Freezing Point - 32°F
pH (Conc.) - 6.0 - 8.0
pH (RTU) - 6.0 - 8.0
Relative Density - 1.000
Evaporation Rate - Similar to water

Auto-ignition temperature - Not applicable
Flash Point - None
Flammability - Not applicable
Flammability Limits - Not applicable
Partition coefficient - Not applicable
Solubility (Water) - Complete
Vapor Density - No data available
Vapor Pressure - No data available
Viscosity - Slightly viscous
% VOC - < 1 (Excluding exempt material)

10. Stability and Reactivity

Reactivity: No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Oxidizers, anionic detergents.
Chemical stability: This product is stable at ambient temperatures and pressures.
Conditions to avoid: Temperatures above 50°C or below 10°C.
Hazardous decomposition products: None known.

11. Toxicological Information

Acute Toxicity: Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Corrosion	Category 1	Ingredient literature
Skin Damage/Irritation	Irritation	Category 2	Ingredient literature

Summary: Skin and eye contact are most likely routes of exposure. Exposure causes skin irritation and serious eye damage.

Subchronic/Chronic Toxicity:

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

Summary: Repeated or prolonged contact causes skin irritation and eye damage.

Carcinogens - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA
Other data - No other toxicological information is available for this mixture.

12. Ecological Information

This material has not been tested for acute environmental effects.
Persistence and degradability: Material is not persistent. All organic components > 1% are inherently biodegradable.
Bio-accumulative potential: No evidence to suggest bio-accumulation will occur.
Mobility: Accidental spillage may lead to penetration of soil and groundwater.

13. Disposal Considerations

Do not contaminate water, food or feed by disposal. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray, or mixture of rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. **Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Fill container ¼ full with water and reclose the container. Agitate vigorously, and dispose of rinsate consistent with pesticide disposal instructions. Repeat two more times. Then offer for recycling if available or puncture and dispose in sanitary landfill or by other procedures approved by state and local authorities. Follow pesticide disposal instructions for rinsate. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state, and federal regulations.

14. Transport Information

Proper Shipping Name: Not regulated **RQ** - Not Applicable
Shipping emergency phone: 800-424-9300
Transport hazard class: Not Applicable **Hazard Label:** Not Applicable
Packing Group: Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

15. Regulatory Information

Inventory status: All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada).
FIFRA: This product is a U.S. EPA Registered pesticide, EPA Reg. No. 47371-131-8155, and is subject to certain labeling requirements under Federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide products. The hazard information required on the pesticide label is reproduced here.
Danger: Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Harmful if inhaled. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. The pesticide label also includes other important information, including directions for use.

OSHA Hazard Communication Standard: This product meets the §1910.1200 definition of a "Hazardous Chemical".

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes	**Delayed (Chronic) Health Hazard**	No
Fire Hazard	No	**Reactive Hazard**	No
Sudden Release of Pressure Hazard	No		

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313
*****Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.
Pennsylvania/New Jersey/Massachusetts Right to Know
See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1%.
California Proposition 65: This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

16. Other information

Date issued: 31. 12. 2014 F800-002
Revision: 01. 02. 2016 Version 002 Revised Odor Property

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D

CANBERRA CORPORATION
SAFETY DATA SHEET

1. Identification

Product Identifier: HUSKY 1022 ULTRA VERSATILE PREMIUM FLOOR FINISH (HSK-1022*)(F1022*)
Application or recommended use: Resilient tile floor finish
Restrictions on use: Do not use in any fashion not specified on the product label.
Manufacturer / supplier: Canberra Corporation
3610 N. Holland-Sylvania Rd.
Toledo, Ohio 43615 USA
Telephone: 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

2. Hazards Identification

GHS Classification: Classification of this mixture in accordance with paragraph (d) of §1910.1200.
Not classified according to current models.

Label Elements:

Symbol: None
Signal word: **CAUTION**
Hazard statements: May cause eye irritation.
Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Other Hazards: Prolonged contact with 2-(2-Ethoxyethoxy)-ethanol may cause central nervous system effects or effects to liver or kidney. In poorly ventilated areas, may cause respiratory tract irritation.

3. Composition / Information on Ingredients

Chemical characterization: Mixture of water, polymers, water soluble solvents and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.

3 - 7% *2-(2-Ethoxyethoxy)-ethanol	CAS 111-90-0, EINECS/ELINCS 203-919-7
1.5 - 4.5% Tris(2-butoxyethyl) phosphate	CAS 78-51-3, EINECS/ELINCS 201-122-9

Other ingredients (> 1%):

> 70% Water	CAS 7732-18-5, EINECS/ELINCS 231-791-2
10 - 25% Acrylic polymers	CAS Not available, EINECS/ELICS None
1 - 5% Oxidized polyethylene wax	CAS 68441-17-8, EINECS/ELICS None

4. First-Aid Measures

Symptoms: Irritation of affected areas. May cause eye irritation.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Skin Contact: Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. If irritation occurs, get medical advice/attention.
Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. If eye irritation occurs, get medical advice/attention.
Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration.
Note to Physician: Treat exposed patients symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Not applicable. Product is not a fire hazard.
Unsuitable Extinguishing Media: High pressure water jet. **Specific hazards in case of fire:** None known.
Special Fire Fighting Precautions: Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

6. Accidental Release Measures

Emergency Procedures: Depending on the extent of release, consider the need for restriction of access to spill area.
Personal Precautions: Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.
Environmental Precautions: Prevent spills from entering storm sewers/drains or contact with soil.

6. Accidental Release Measures (cont.)

Clean up Methods: Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

7. Handling and Storage

Precautions for Safe Handling: Read label before use. Avoid contact with skin or eyes. Wash hands, face and any skin contact thoroughly after handling. Wear protective gloves, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.
Conditions for Safe Storage: Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10˚ - 30˚C), dry area.
Incompatibility: Acids, oxidizers, salts.

8. Exposure Controls / Personal Protection

Components with occupational exposure limits:

Component	Reference	WEEL TWA (8 hour)
2-(2-Ethoxyethoxy)-ethanol	AIHA	25 ppm

Engineering Controls: Proper ventilation in accordance with good industrial hygiene should be provided.
Personal Protective Equipment
Respiratory: Respiratory protection is not necessary under normal conditions of use.
Gloves: Recommended. **Eye Protection:** Recommended.
Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

9. Physical and Chemical Properties

Physical State - Liquid
Color - White
Odor - Acrylic odor
Odor Threshold - No data available
Boiling Point - 212°F
Decomposition temperature - No data available
Freezing Point - 32°F
pH (Neat) - 8.0 - 9.5
Relative Density - 1.020 - 1.040
Evaporation Rate - Similar to water
Auto-ignition temperature - Not applicable
Flash Point - None
Flammability - Not applicable
Flammability Limits - Not applicable
Partition coefficient - Not applicable
Solubility (Water) - Complete
Vapor Density - No data available
Vapor Pressure - No data available
Viscosity - Slightly viscous
% VOC - < 1 (Excluding exempt material)

10. Stability and Reactivity

Reactivity: No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Acids, oxidizers, salts.
Chemical stability: This product is stable at ambient temperatures and pressures.
Conditions to avoid: Temperatures above 50°C or below 10°C.
Hazardous decomposition products: None known.

11. Toxicological Information

Acute Toxicity: Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Not applicable	Not applicable	Ingredient literature
Skin Damage/Irritation	Not applicable	Not applicable	Ingredient literature

Summary: Skin and eye contact are most likely routes of exposure. May cause eye irritation

Subchronic/Chronic Toxicity:

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

Summary: Repeated or prolonged contact causes skin or eye irritation, central nervous system, liver or kidney effects.

Carcinogens - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA
Other data - No other toxicological information is available for this mixture.

12. Ecological Information

This material has not been tested for acute environmental effects.
Persistence and degradability: No data is available for persistence or degradability.
Bio-accumulative potential: No evidence to suggest bio-accumulation will occur.
Mobility: Accidental spillage may lead to penetration of soil and groundwater.

13. Disposal Considerations

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

14. Transport Information

Proper Shipping Name: Not regulated **RQ** - Not Applicable
Shipping emergency phone: 800-424-9300
Transport hazard class: Not Applicable **Hazard Label:** Not Applicable
Packing Group: Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

15. Regulatory Information

Inventory status: All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

OSHA Hazard Communication Standard: This product is not classified according to current models.

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312

Immediate (Acute) Health Hazard	No	**Delayed (Chronic) Health Hazard**	No
Fire Hazard	No	**Reactive Hazard**	No
Sudden Release of Pressure Hazard	No		

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313
*****Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

Pennsylvania/New Jersey/Massachusetts Right to Know
See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

California Proposition 65: This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

16. Other information

Date issued: 31. 12. 2014 F1022-004 Revision: N/A

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation

CANBERRA CORPORATION
SAFETY DATA SHEET

1. Identification

Product Identifier: HUSKY 1041 MULTI-PURPOSE REJUVENATOR
Application or recommended use: Floor cleaner/restorer
Restrictions on use: Do not use in any fashion not specified on the product label.
Manufacturer / supplier: Canberra Corporation
3610 N. Holland-Sylvania Rd.
Toledo, Ohio 43615 USA
Telephone: 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

2. Hazards Identification

GHS Classification: Classification of this mixture in accordance with paragraph (d) of §1910.1200.
Eye Damage/Irritation - Category 2A

Label Elements:

Symbol:
Signal word: **WARNING**
Hazard statements: Causes serious eye irritation.
Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.
Wear eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Other Hazards: None known

3. Composition / Information on Ingredients

Chemical characterization: Mixture of water, detergents and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.

1 - 5%	Cocamidopropyl sultaine	CAS 68139-30-0, EINECS/ELINCS 268-761-3

Other ingredients (> 1%):

1 - 5%	Polyethylene wax	CAS 9002-88-4, EINECS/ELINCS N/A
> 90%	Water	CAS 7732-18-5, EINECS/ELINCS 231-791-2

4. First-Aid Measures

Symptoms: Irritation of affected areas. Causes serious eye irritation.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation: Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.
Skin Contact: Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. If skin irritation occurs, get medical advice/attention.
Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. If eye irritation persists, get medical advice/attention.
Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration.
Note to Physician: Treat exposed patients symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Not applicable. Product is not a fire hazard.
Unsuitable Extinguishing Media: High pressure water jet. **Specific hazards in case of fire:** None known.
Special Fire Fighting Precautions: Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

6. Accidental Release Measures

Emergency Procedures: Depending on the extent of release, consider the need for restriction of access to spill area.
Personal Precautions: Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.
Environmental Precautions: Prevent spills from entering storm sewers/drains or contact with soil.

6. Accidental Release Measures (cont.)

Clean up Methods: Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

7. Handling and Storage

Precautions for Safe Handling: Read label before use. Avoid contact with skin or eyes. Wash hands, face and any skin contact thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, protective clothing, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor immediately.

Conditions for Safe Storage: Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10˚ - 30˚C), dry area.

Incompatibility: None known.

8. Exposure Controls / Personal Protection

Components with occupational exposure limits: None

Engineering Controls: Proper ventilation in accordance with good industrial hygiene should be provided.

Personal Protective Equipment

Respiratory: Respiratory protection is not necessary under normal conditions of use.

Gloves: Recommended.

Eye Protection: Chemical resistant goggles recommended.

Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

9. Physical and Chemical Properties

Physical State - Liquid
Color - White
Odor - Clean & Fresh
Odor Threshold - No data available
Boiling Point - 212°F
Decomposition temperature - No data available
Freezing Point - 32°F
pH (Neat) - 9.5 - 10.5
pH (RTU) - 8.5 - 10.5
Relative Density - 1.005
Evaporation Rate - Similar to water

Auto-ignition temperature - Not applicable
Flash Point - None
Flammability - Not applicable
Flammability Limits - Not applicable
Partition coefficient - Not applicable
Solubility (Water) - Complete
Vapor Density - No data available
Vapor Pressure - No data available
Viscosity - Water thin
% VOC - < 0.4 (Excluding exempt material)

10. Stability and Reactivity

Reactivity: No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Oxidizers.

Chemical stability: This product is stable at ambient temperatures and pressures.

Conditions to avoid: Temperatures above 50°C or below 10°C.

Hazardous decomposition products: None known.

11. Toxicological Information

Acute Toxicity: Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Irritation	Category 2A	Ingredient literature
Skin Damage/Irritation	Not applicable	Not applicable	Ingredient literature

Summary: Skin and eye contact are most likely routes of exposure. Causes eye irritation.

Subchronic/Chronic Toxicity:

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

Summary: Repeated or prolonged contact causes eye irritation.

Carcinogens - Ingredients are not listed on NTP Report on Carcinogens, IARC Monographs or by OSHA.

Other data - No other toxicological information is available for this mixture.

12. Ecological Information

This material has not been tested for acute environmental effects.
Persistence and degradability: Material is not persistent. All organic components > 1% are readily biodegradable.
Bio-accumulative potential: No evidence to suggest bio-accumulation will occur.
Mobility: Accidental spillage may lead to penetration of soil and groundwater.

13. Disposal Considerations

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

14. Transport Information

Proper Shipping Name: Not regulated **RQ** - Not Applicable
Shipping emergency phone: 800-424-9300
Transport hazard class: Not Applicable **Hazard Label:** Not Applicable
Packing Group: Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

15. Regulatory Information

Inventory status: All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

OSHA Hazard Communication Standard: This product meets the §1910.1200 definition of a "Hazardous Chemical".

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes	**Delayed (Chronic) Health Hazard**	No
Fire Hazard	No	**Reactive Hazard**	No
Sudden Release of Pressure Hazard	No		

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313
*****Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

Pennsylvania/New Jersey/Massachusetts Right to Know
See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

California Proposition 65: This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

16. Other information

Date issued: 31. 12. 2014	F1041-001
Revision: 31. 12. 2017 Version: 002	Updated reference number
Revision: 02. 07. 2018 Version: 003	Cocodiethanolamide removed and warning removed for California Prop 65

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation

Ergon Refining, Inc.

SAFETY DATA SHEET

1. Identification

Product identifier **Hyvolt II C50B**

Other means of identification Not available.

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer: Ergon Refining
Address: 2611 Haining Rd
Vicksburg, Mississippi 39183
E-Mail: sds@ergon.com

Emergency Contacts

Ergon Refining: 1.601.638.4960 Normal Business Hours
Chemtrec: 1.800.424.9300 After Business Hours (North America Only)
1.703.527.3887 After Business Hours (International)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Aspiration hazard Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement May be fatal if swallowed and enters airways.

Prevention Do not breathe gas/mist/vapors/spray.

Response Not available.

Storage Not available.

Disposal Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. See section 13 of this SDS for disposal instructions.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC		64742-53-6	45.0 - 99.9
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC		64742-55-8	0 - 55
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED LIGHT PARAFFINIC		64742-56-9	0 - 20
2,6-DI-TERT-BUTYL-P-CRESOL [BUTYLATED HYDROXYTOLUENE		128-37-0	< 0.3

4. First-aid measures

Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. IF exposed or concerned: Get medical advice/attention.
Skin contact	Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If skin irritation or an allergic skin reaction develops, get medical attention.
Eye contact	Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Defatting of the skin.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Contact physician if discomfort continues.

5. Fire-fighting measures

Suitable extinguishing media	Halon. Dry chemicals. Foam. Carbon dioxide (CO2). Water spray or fog. Do not use water jet as an extinguisher, as this will spread the fire.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	No unusual fire or explosion hazards noted.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire-fighting equipment/instructions	Cool containers exposed to flames with water until well after the fire is out. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Use pressurized air mask if product is involved in a fire.
General fire hazards	No unusual fire or explosion hazards noted. Flammability Class: Combustible IIIB

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Large Spills: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth or absorbent material then place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewer, basements or confined areas. Avoid discharge to the aquatic environment. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. If this material is spilled into navigable waters and creates a visible sheen, it is reportable to the National Response Center.

7. Handling and storage

Precautions for safe handling	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands after handling and before eating. Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure. All handling to take place in well-ventilated area. Shower after work. Remove and wash contaminated clothing promptly.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Store in a well-ventilated place. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC (CAS 64742-53-6)	PEL	5 mg/m3	Mist.
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC (CAS 64742-55-8)	PEL	5 mg/m3	Mist.
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED LIGHT PARAFFINIC (CAS 64742-56-9)	PEL	5 mg/m3	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2,6-DI-TERT-BUTYL-P-CRESOL [BUTYLATED HYDROXYTOLUENE (BHT)] (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	Form
Hyvolt II C50B (CAS Mixture)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

Components	Type	Value	Form
2,6-DI-TERT-BUTYL-P-CRESOL [BUTYLATED HYDROXYTOLUENE (BHT)] (CAS 128-37-0)	TWA	10 mg/m3	
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC (CAS 64742-53-6)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC (CAS 64742-55-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED LIGHT PARAFFINIC (CAS 64742-56-9)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Adequate ventilation should be provided whenever the material is heated or mists are generated. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection Goggles/face shield are recommended.

Hand protection Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

Other Chemical/oil resistant clothing is recommended. Launder contaminated clothing before reuse.

Respiratory protection	Under normal conditions, respirator is not normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Thermal hazards	Not available.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance	Clear & bright
Physical state	Liquid.
Form	Liquid.
Color	Water White to Pale
Odor	Mild Petroleum Odor
Odor threshold	Not available.
pH	Not applicable
Melting point/freezing point	< -40 °F (< -40 °C) ASTM D 5950
Initial boiling point and boiling range	> 460 °F (> 237.78 °C) ASTM D 2887/ ISO 3294
Flash point	>= 293.0 °F (>= 145.0 °C) Cleveland Open Cup ASTM D 92/ ISO 2592
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.89 (60.08 °F (15.6 °C) ASTM D 4052/ ISO 12185)
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not established.
Auto-ignition temperature	> 599 °F (> 315 °C) ASTM E 659
Decomposition temperature	Not available.
Viscosity	9.3 cSt (104 °F (40 °C) ASTM D 341)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport
Chemical stability	Stable.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause gastrointestinal discomfort if swallowed. Do not induce vomiting. Vomiting may increase risk of product aspiration. May be fatal if swallowed and enters airways.
Inhalation	May be fatal if swallowed and enters airways.

Eye contact	May be irritating to eyes.
Symptoms related to the physical, chemical and toxicological characteristics	Defatting of the skin. Coughing. Shortness of breath. Discomfort in the chest.

Information on toxicological effects

Acute toxicity Not applicable.

Components	Species	Test Results
2,6-DI-TERT-BUTYL-P-CRESOL [BUTYLATED HYDROXYTOLUENE (BHT)] (CAS 128-37-0)		
Acute		
Oral		
LD50	Guinea pig	10700 mg/kg
	Mouse	1040 mg/kg
	Rat	890 mg/kg

Not available. * Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	May cause defatting of the skin, but is neither an irritant nor a sensitizer.
Serious eye damage/eye irritation	Not classified. May cause minor irritation on eye contact.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not classified. May cause defatting of the skin, but is neither an irritant nor a sensitizer.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Nota L - Meets EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound (PAC) using IP 346. Not classified.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Contains no ingredient listed as toxic to reproduction
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.
Further information	Risk of chemical pneumonia after aspiration.

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

Product		Species	Test Results
Hyvolt II C50B (CAS Mixture)			
Crustacea	EC50	Daphnia	863.8272 mg/l, 48 hours estimated

Components		Species	Test Results
2,6-DI-TERT-BUTYL-P-CRESOL [BUTYLATED HYDROXYTOLUENE (BHT)] (CAS 128-37-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	1.44 mg/l, 48 hours

Not available. * Estimates for product may be based on additional component data not shown.

Persistence and degradability	Not inherently biodegradable.
Bioaccumulative potential	Bioaccumulation is unlikely to be significant because of the low water solubility of this product.
Mobility in soil	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Hazardous waste code Not applicable.

Waste from residues / unused products Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

HyVolt oils are certified to be PCB-free. HyVolt oils are processed from naturally occurring raw materials with no additives or recycled oils that might introduce PCB contamination.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

Not Listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 06-06-2014

Revision date 03-02-2016

Version # 02

References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Chemical Abstracts Service Registry Handbook
CRC: Handbook of Chemistry and Physics
ILO Safety Cards
International Labour Organization
International Maritime Organization Marine Pollutants List
NFPA Hazardous Chemical Data Sheets
NIOSH Pocket Guide
Registry of Toxic Effects of Chemical Substances (RTECS)
US DOT Hazardous Materials Regulations

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information	Composition / Information on Ingredients: Disclosure Overrides Physical & Chemical Properties: Multiple Properties Regulatory Information: United States Regulatory information: US federal regulations REACH: Registration Substance

Safety Data Sheet

1. Identification

Product Name : IMPEL
Synonyms : None
Product Use : Oil-Surfactant Penetrant/Low Volume Basal Oil
Manufacturer/Supplier : Helena Chemical Company
Address : 225 Schilling Blvd. Collierville, TN 38017
General Information : 901-761-0050
Transportation Emergency Number : CHEMTREC:800-424-9300

2. Hazard Identification

Signal Word : Danger
Skin Irritation : Not classified as hazardous
Eye Irritation : Not classified as hazardous
Acute Toxicity Oral : Not classified as hazardous
Acute Toxicity Dermal : Not classified as hazardous

Hazard Categories : Aspiration Hazard-1

Hazard Statement : May be fatal if swallowed and enters airways

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Blend of Aliphatic Hydrocarbon Oils, Surfactants and Nonionic Emulsifiers	Proprietary	100.00

4. First Aid Measures

Eye : Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Skin : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation : Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion : Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water. Do not induce vomiting. Do not give anything by mouth if unconscious.
Indication of Immediate Medical Attention and Special Treatment Needed : In the event of an adverse response, treatment should be directed toward control of the symptoms.

5. Fire Fighting Measures

Extinguishing Media : Carbon dioxide, dry chemical, chemical foam or water fog.
Specific Hazards Arising from the Chemical : Product can be made to burn even though flash point >200 Degrees F.

Special Fire Fight Proc : Wear positive-pressure self-contained breathing apparatus and full protective clothing. Avoid getting water from fire fighting into domestic or irrigation water supplies.

6. Accidental Release Measures

Personal Precautions : Keep unprotected and unnecessary personnel out of spill area.

Protective Equipment : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Respiratory protection not normally needed. Eyewash and emergency shower should be available in work area.

Emergency Procedures : Spill area will be quite slippery. Dike and contain spilled liquid to prevent spreading.

Methods and Materials for Containment and Cleanup : If uncontaminated, collect reuse as intended. If contaminated, absorb spill with clay, sand or sawdust. Scoop, sweep or shovel up absorbent and place in a chemical waste container for proper disposal.

7. Handling and Storage

Precautions for Safe Handling : Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Avoid breathing dust, fumes, gas, mist, vapors or spray. Wash hands thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection.

Conditions for Safe Storage : Store in a cool, well-ventilated place. Keep in original container with lid tightly closed. Do not reuse empty container. Do not store with food, feed or other material to be used or consumed by humans or animals. Do not contaminate water supplies. For optimal storage, store between 40 Degrees F. and 90 Degrees F.

8. Exposure Controls / Personal Protection

TLV/PEL : No TLV or PEL available.

Appropriate Engineering Controls : Normal room ventilation (mechanical) or outdoor use should be satisfactory.

Personal Protective Equipment : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Respiratory protection not normally needed. Eyewash and emergency shower should be available in work area.

9. Physical and Chemical Properties

Odor/Appearance : Light amber liquid; little odor.

Flash Point, ^{0}F : >200 Degrees F.

Boiling Point, ^{0}F : Unknown

Melting Point(Freezing point), ^{0}C : Unknown

Vapor Pressure, mm Hg @ 20 ^{0}C : Unknown

Vapor Density : Unknown

Solubility in Water : Dispersible

Molecular Formula : Not applicable, formulated mixture.

Density, g/mL @ 25 ^{0}C : 0.838-0.859

Evaporation Rate(Butyl Acetate = 1) : Unknown

Octanol/Water Partition Coefficient : No information found

pH : Not applicable

Flammable Limits (approximate volume % in air) : No information found

Auto-ignition Temperature : Not established
Decomposition temperature : Unknown

10. Stability and Reactivity

Reactivity : No information found
Chemical Stability : Stable
Hazardous Decomposition Products : None known
Hazardous Polymerization : Will not occur
Conditions to Avoid : None known
Incompatible Materials : None known

11. Toxicological Information

Acute Toxicity (Oral LD50) : No LD50 available. Not classified as hazardous by ingestion.
Acute Toxicity (Dermal LD50) : No LD50 available. Not classified as hazardous by skin contact.
Acute Toxicity Inhalation LC50 : No LC50 available. Not classified as hazardous by inhalation.
Likely Routes of Exposure : Ingestion/aspiration
Skin Irritation : Not classified as hazardous by skin contact.
Eye Irritation : Not classified as hazardous by eye contact.
Skin Sensitization : Not a skin sensitizer.
Carcinogenic : Not listed as a carcinogen.
Chronic Effects : No information found
Other Hazards : Aspiration hazard. May be fatal if swallowed and enters airways.

12. Ecological Information

Ecotoxicity : No information found
Persistence and Degradability : No information found
Bioaccumulative Potential : No information found
Mobility in Soil : No information found
Other Adverse Effects : No information found

13. Disposal Considerations

Waste Disposal Method : This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

14. Transport Information

UN Proper Shipping Name : Not regulated by DOT, IATA or IMDG.
Transport Hazard Class : None
UN Identification Number : None
Packaging Group : None
Environmental Hazards : No information found
Transport in Bulk : No information found
Special Precautions for Transportation : No information found
Freight Classification : Adhesives, Adjuvants, Spreaders or Stickers, N.O.I. (NMFC Item 42652, Class 60)

15. Regulatory Information

National Fire Protection Association Rating :

Health: 1 Fire: 1 Reactivity: 0

Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

S.A.R.A Title III Hazard Classification (Yes/No) :

Immediate(Acute) Health:	Y
Delayed (Chronic) Health:	N
Sudden Release of Pressure:	N
Fire:	N
Reactive:	N

16. Other Information

Data of Preparation/Revision : 18-September-2015

S03610 , A03610

MATERIAL SAFETY DATA SHEET SPRAYON

03610
03 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
03610

PRODUCT NAME
KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (Fluorescent), Safety Red

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
14	74-98-6	**Propane**		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
6	106-97-8	**Butane**		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
14	142-82-5	**Heptane**		
		ACGIH TLV	400 PPM	50 mm
		ACGIH TLV	500 PPM STEL	
		OSHA PEL	400 PPM	
		OSHA PEL	500 PPM STEL	
2	64742-89-8	**V. M. & P. Naphtha**		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
15	108-88-3	**Toluene**		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes

Health	2
Flammability	3
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:
- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	0.9	9.5	Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.
OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.63 lb/gal	794 g/l
SPECIFIC GRAVITY	0.80	
BOILING POINT	<0 - 325 °F	<-18 - 162 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	92%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)
Volatile Weight 54.38% Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
142-82-5	Heptane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	V. M. & P. Naphtha			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene			
		LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U, ADR (D)

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	15	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

DATE OF PREPARATION: 3-1-01 WPK -3-S

Section I - IDENTIFICATION

MANUFACTURER'S NAME: **ICORP - IFOAM Specialty Products Corp.**

STREETADDRESS: **250 Power Court** CITY, STATE, AND ZIP CODE: **Sanford, Florida 32771**

EMERGENCY TELEPHONE NO.: **(407) 328-8500**

PRODUCT CLASS: **Part A - Modified Epoxy Resin**
IDENTIFICATION: **Part B - Modified Acidic Hardener**

MANUFACTURER'S CODE
IFOAM-FBR™ Structural, Epoxy Foam

TRADE NAME: **IFOAM-FBR™**

Section II - HAZARDOUS INGREDIENTS / PHYSIOLOGICAL EFFECTS

INGREDIENT	%	TLV	LD50 (Mg/Kg)		IRRITATION INDEX		SYMPTOMS OF EXPOSURE
			ORAL	DERMAL	SKIN	EYES	
Part A, Bisphenol A Diglycidyl Ether Resin **CAS No. 25068-38-6**	**<50**	**Not established**	**>10,000 (Rats)**	**>6,000 (Rabbits)**	**Moderate irritation (Rabbits)**	**Slight irritation (Rabbits)**	**Moderate sensitizer**
Part A, Isophorone **CAS No. 78-59-1**	**<2**	**5 ppm ceiling, ACGIH** **4 ppm TWA, OSHA**	**N.D.**	**N.D.**	**Slight irritation**	**Severe irritation**	**None anticipated**
Part B, Stannous Fluoborate Solution **CAS No. 13814-97-6**	**<50**	**2 mg/M^3 as Sn TWA** **(4 mg/M^3 STEL ACGIH 1984)**	**N.D.**	**N.D.**	**N.D.**	**Extremely irritating**	**Eye and skin contact cause burns. May cause irritation of upper respiratory tract.**

Section III - CHEMICAL AND PHYSICAL PROPERTIES

Property	Part A	Part B
Boiling Point	200°C	approx. 212° F
Pounds/Gallon	12 lbs.	12 lbs.
Appearance	Liquid	Liquid
Color	Brown	Winter-Blue (Florescent) Summer-Red (Florescent)
Volatile by Volume (%)	NIL	N.A.
Vapor Pressure (MM Hg)	1 @180°C	N.A.
Vapor Density (Air = 1)	NIL	N.A.
Evaporation	NIL	N.A.

Hazardous Polymerizations ___X___ May Occur _____ Do Not Occur

Suspected Cancer Agent _____ YES ___X___ NO

Conditions to Avoid: **Strong acids, amines, mercaptans and bases.**

Section IV - EMERGENCY AND FIRST AID PROCEDURES

First Aid:

Eyes: **Flush thoroughly with water for at least fifteen (15) minutes. Get immediate medical attention.**

Skin: **Wash contaminated area with soap and water, but if drenched, remove contaminated clothing under safety shower and flood exposed areas with water. Get immediate medical attention. Wash clothing before reuse.**

Ingestion: **DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention. Wash clothing before reuse.**

Inhalation: **Should symptoms noted under Hazardous Ingredients/Physiological Effects (Section II, above) be noted, remove to fresh air. If not breathing, apply artificial respiration.**

N.D. - Not Determined *N.A. - Not Applicable* *< Less Than* *> Greater Than*

Section V - FIRE PROTECTION INFORMATION

Property		Part A	Part B
Ignition Temperature (°F)		N.D.	N.A.
Flash Point (Method)		490°F (C.O.C)	N.A.
Flamable limits (%)	Lower:	N.A.	N.A.
	Upper:	N.A.	N.A.

Products evolved when subjected to heat or combustion:
Ammonia, carbon monoxide, and carbon dioxide may be formed on burning in limited air supply.

Recommended fire extinguishing agents and special procedures:
Use water spray, dry chemical, foam, or carbon dioxide in accordance with National Fire Protection Association guidelines. Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse vapors and to provide protection for persons attempting to stop the leak.

Unusual or explosive hazards:
Part A: **None**
Part B: **Temperatures at or above the boiling point may cause generation of a toxic mist, boron trifluoride.**

Special Fire Fighting Procedures:
None

Section VI - OCCUPATIONAL CONTROL PROCEDURES

Protective Equipment Type:

Eyes: **Splash-proof goggles or safety spectacles with side sheilds.**

Skin: **Wear clean, body-covering clothing when handling any epoxy resin system. When cleaning large spills or when handling large quantities which may be subject to splashes and spills, further safety equipment (impervious suits, rubber gloves and rubber boots) should be used as necessary to prevent contact with material.**

Inhalation: **Breathing of vapors must be avoided. NIOSH approved respiratory protection required in the absence of proper ventilation or if exposure may or does exceed occupational exposure limits (Sec. II). FOR EMERGENCIES a self-contained breathing apparatus or full-face respirator is recommended.**

Section VII - ENVIRONMENTAL PROTECTION

Waste Disposal Method:
This product has been evaluated for RCRA characteristics and does not meet criteria of a hazardous waste if discarded in its purchased form - as determined at the date of this publication. Dispose of in accordance with Federal, State, and Local laws.

Procedures in case of breakage or leakage:
Avoid all personal contact. Contain spill if possible. Wipe up or absorb in suitable material and shovel into closable container. Flush contaminated area with water.

Remarks: **Product uses, transformations, mixture, processes, etc., may render the resulting material hazardous. Under RCRA it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste.**

Section VIII - REGULATORY INFORMATION

Part A (Epoxy Resin): **Not Regulated**

Part B (Epoxy Catalyst): **Consumer Commodity ORM-D**

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgement.

This Material Safety Data Sheet (MSDS) has been prepared in compliance with the Federal OSHA Hazard Communication Standard 29 CFR §1910.1200. Both Part A and Part B of this product are considered to be a hazardous chemical under that standard. This product is not considered to be carcenogenic by NTP, LARC, or OSHA.

ICORP intends to comply fully with the provisions of the Toxic Substance Control Act and The State of California Hazardous Substances Information and Training Act. To determine applicability or effect of any law or regulation with respect to this product, user should consult his legal advisor or the appropriate government agency. ICORP does not undertake to furnish advice on such matters.

By: Phillip G. Landers Coordinator of Product Safety: Phillip G. Landers

Date: March 1, 2001 ☐ New ☒ Revised Supersedes: 10/21/98

N.D. - Not Determined *N.A. - Not Applicable* *< Less Than* *> Greater Than*

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE AND PREPARATION

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
P.O. Box 53
Stillwater, MN 55082 USA
Phone: 1-651-430-2270
Fax: 1-651-430-3634

Polywater Europe BV
Mauritsplaat 126
NL-3012CD Rotterdam
Netherlands
Tel: +31 10 233 0578

Emergency Number: +1-651-430-2270

Product Name: Polywater® Lubricant J

Chemical Description: Water Emulsion of Polymers

Product Use: Cable and Duct Lubrication

2. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains no reportable hazardous components under 29 CFR 1910.1200. There are no OSHA or ACGIH threshold limit values for the product or any of its ingredients. This product contains no reportable hazardous components under European Directives 91/55/EEC. All components are listed on the TSCA inventory.

3. HAZARDS IDENTIFICATION

Emergency Overview:	Lubricant is electrically conductive when applied. Dry from conductor before energizing circuit.
Eye Contact:	Direct eye contact may cause eye irritation. This irritation is minimal and expected to be transient.
Skin Contact:	This product has low skin irritation potential. There is no dermal toxicity hazard.
Irritation and Sensitization Potential:	This product has low skin irritation potential. It is not a sensitizer.
Inhalation (Breathing):	No inhalation hazard expected with water vapor.
Ingestion (Swallowing):	Very low ingestion hazard.

4. FIRST AID MEASURES

Eye Contact:	Flush eyes with a large quantity of water for 15 minutes. If irritation continues, seek medical attention.
Skin Contact:	If skin becomes irritated, wash area thoroughly with soap and water. If irritation continues, seek medical attention.
Inhalation (Breathing):	No first aid expected to be required. Not an inhalation hazard.
Ingestion (Swallowing):	No first aid expected to be required. If difficulties arise, contact a physician.

5. FIRE-FIGHTING MEASURES

Flash Point:	None
Flammable Limits:	Product is not flammable.
Autoignition Temperature:	Does not apply.
Hazardous Decomposition and By-Products:	High temperature steam, potentially carbon monoxide and carbon dioxide.
Extinguishing Media:	Does not apply.
Special Precautions:	Does not apply.
Unusual Hazards:	Sealed container can build up pressure when exposed to high heat. Cool containers with water.

6. ACCIDENTAL RELEASE MEASURES

Lubricant is extremely slippery. It should be washed, swept, or squeegeed from floor using wet mops. Oxidizing agents, such as household bleach, can be used to eliminate the slippery character. Outside, spills should be covered with sand, dirt, gravel or calcium chloride.

7. HANDLING AND STORAGE

Keep product containers closed when not in use. Avoid spills and clean them up immediately when they occur. Product is very slippery.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection:	Normal ventilation is adequate.
Protective Gloves:	For repeated or prolonged skin contact, the use of impermeable gloves is recommended to prevent drying and possible irritation.
Eye Protection:	Safety glasses recommended.
Exposure Limits and Recommendations:	Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	An opaque, cream-colored, stringy gel with a faint characteristic odor.
Odor Threshold:	Not Available
Vapor Density (Air = 1):	0.9 – 1.1
Specific Gravity (H_2O = 1):	1.01
Solubility in Water:	Complete

Boiling Point:	~ 212°F (100°C)
Freezing Point:	~ 32°F (0°C)
Vapor Pressure:	18 mm Hg @ 72°F (22°C)
Viscosity:	25,000-40,000 cps. @ 10rpm.
pH:	7.5 to 9.0
Volatiles (Weight %):	95.7%
VOC Content:	10 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	None known.
Materials to Avoid:	Avoid materials that react with water.
Hazardous Decomposition and By-Products:	Carbon dioxide, carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Oral Toxicity:	Based on ingredients, LD_{50} (rat) is estimated to be well over 50 g/kg.
Chronic Exposure:	Not Available
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.
Reproductive Toxicity:	Not Available
Mutagenicity:	Not Available
Teratogencity:	Not Available
Toxicologically Synergistic Products:	Not Available

12. ECOLOGICAL INFORMATION

Mobility:	No information available.
Bioaccumulation:	No information available.
Ecotoxicity:	No information available.

13. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with National and Local Regulations.

14. TRANSPORTATION INFORMATION

UN Number:	Not Listed
UN Proper Shipping Name:	Not Applicable
Class and Subsidiary Risk:	Not Applicable
Packing Group:	Not Applicable
TDG:	Not Regulated
ICAO/IATA-DGR:	Not Regulated
IMDG:	Not Regulated
ADR/RID:	Not Regulated

15. REGULATORY INFORMATION

USA Federal and State

All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting	Acute	Chronic	Fire	Pressure	Reactive
	No	No	No	No	No

Components	CERCLA/SARA Sec 302 Hazardous Substance RQ	CERCLA/SARA Sec 302 EHS TPQ	SARA Sec. 313 Toxic Release

Components are not affected by these Superfund regulations.

European Union

Product is not classified as hazardous according to European Directives 88/379/EEC and 67/548/EEC and EU Regulation (EC) No 1272/2008.

Risk Phrases:	Not Applicable
Safety Phrases:	Not Applicable

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. It does not contain Substances of Very High Concern (SVHC).

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Classification:	NC
Canadian DSL:	All ingredients listed.

Australia

All components are listed on the AICS.
Not considered hazardous according to criteria of NOHSC Australia.

Contact Information:

ADAPT Australia Pty. Ltd.
11 - 19 Global Drive
Tullamarine Victoria 3043
Telephone Number. 03 9330 0666

Emergency Telephone Number: 0421 277 889

16. OTHER INFORMATION

NFPA Ratings:	Health:	0
	Fire:	0
	Reactivity:	0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

Revision Date: January 27, 2012
Revision Number: 2
Reviewed By: S. H. Dahlke

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

J:MSDS

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/15/2019 Reviewed on 01/01/2019

1 Identification

· **Product identifier**

· **Trade name: Jamson Sodium Hydroxide Liquid 50%**

· **Article number: 3333JLM**

Jamson Labs
Quality Chemicals Since 1973

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Jamson Laboratories, Inc.
101 South Bayview Blvd.
Oldsmar, FL 34677
USA
Tiger Blend Chemicals, LLC.
P.O. Box 53451
Shreveport, LA 71135

· **Information department:** Product Safety Department
· **Emergency telephone number:** ChemTel Inc. (800) 255-3924 Intl. +01 (813) 248-0585

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05

· **Signal word** Danger

· **Hazard-determining components of labeling:**
sodium hydroxide
· **Hazard statements**
Causes severe skin burns and eye damage.
· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P321	Specific treatment (see on this label).
P405	Store locked up.

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Trade name: Jamson Sodium Hydroxide Liquid 50%

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
1310-73-2	sodium hydroxide	25-50%

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:**
Use a respiration bag or breathing device.
Seek medical treatment.
Do not use mouth to mouth or mouth to nose resuscitation.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Call a doctor immediately.
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
A person vomiting while lying on their back should be turned onto their side.
Do not induce vomiting; immediately call for medical help.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
Nausea
Cramp
Gastric or intestinal disorders
· **Danger** Danger of gastric perforation.

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· **Indication of any immediate medical attention and special treatment needed**
Medical supervision for at least 48 hours.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow to enter sewers/surface or ground water
Dilute with plenty of water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Provide alkali-resistant floor.
Unsuitable material for receptacle: glass or ceramic.
Unsuitable material for receptacle: aluminium.
· **Information about storage in one common storage facility:** Store away from water.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

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· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
1310-73-2 sodium hydroxide	
PEL	Long-term value: 2 mg/m³
REL	Ceiling limit value: 2 mg/m³
TLV	Ceiling limit value: 2 mg/m³

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Not required.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
Neoprene gloves
Fluorocarbon rubber (Viton)
Butyl rubber, BR
Natural rubber, NR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Not suitable are gloves made of the following materials:**
Leather gloves
Strong gloves
· **Eye protection:**

Tightly sealed goggles

· **Body protection:**
Apron
Boots
Alkaline resistant protective clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Colorless
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	14
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	<144 °C (<291.2 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not determined.
· **Density at 20 °C (68 °F):**	1.623 g/cm³ (13.54394 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.0 %
Water:	45.0 %
VOC content:	0.0 g/l / 0.00 lb/gl
Solids content:	55.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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· **Possibility of hazardous reactions**
With inorganic acid chlorides.
Reacts with certain metals.
Reacts with metals forming hydrogen.
Corrodes aluminium.
Strong exothermic reaction with acids.
Reacts with water and acids.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:**
Sodium Oxides
Hydrogen

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
1310-73-2 sodium hydroxide		
Oral	LD50	2000 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** Strong caustic effect on skin and mucous membranes.
· **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.
· **NTP (National Toxicology Program)**
no ingredient above de minimis level is listed
· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.

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· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
After prior treatment product has to be landfilled adhering to the regulations pertaining to the disposal of particularly hazardous waste.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, IMDG, IATA**	UN1824
· **UN proper shipping name**	
· **DOT**	Sodium hydroxide solution mixture
· **IMDG, IATA**	SODIUM HYDROXIDE SOLUTION mixture
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	8 Corrosive substances
· **Label**	8
· **IMDG, IATA**	

· **Class**	8 Corrosive substances
· **Label**	8

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Trade name: Jamson Sodium Hydroxide Liquid 50%

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· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	
· **Danger code (Kemler):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Alkalis
· **Stowage Category**	A
· **Segregation Code**	SG35 Stow "separated from" acids.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations**	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1824 SODIUM HYDROXIDE SOLUTION MIXTURE, 8, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the substances are listed

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicalsknown to cause reproductive toxicity for males.**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS05

· **Signal word** Danger

· **Hazard-determining components of labeling:**
sodium hydroxide

· **Hazard statements**
Causes severe skin burns and eye damage.

· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P321	Specific treatment (see on this label).
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.
· **Contact:** Product Safety Department
· **Date of preparation / last revision** 02/15/2019 / -
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)

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Trade name: Jamson Sodium Hydroxide Liquid 50%

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

https://msdsreport.com/msds/BFMTJ

K-LENS-M LENS CLEANER (#403,208,216,297)

MSDS Number

BFMTJ

National Stock Number

6850-00-737-0811

Product Name

K-LENS-M LENS CLEANER (#403,208,216,297)

Manufacturer

WILKINS CO INC

Product Identification

Product ID:K-LENS-M LENS CLEANER (#403,208,216,297)
MSDS Date:10/11/1990
FSC:6850
NIIN:00-737-0811
MSDS Number: BFMTJ

Responsible Party

WILKINS CO INC

220 GROTON AVE

CORTLAND , NY 13045-1814

US

Emergency Phone: 607-756-7548/607-749-2369(NIGHTS)

Info Phone: 607-756-7548

Cage: 30483

Contractor

WILKINS CO INC

628

CORTLAND, NY 13045-1814

US

Cage: 30483

Ingredients

ETHYL ALCOHOL (ETHANOL)

CAS: 64-17-5

RTECS: KQ6300000

Fraction By Weight: 20%

OSHA PEL1000 PPM

ACGIH TLV: 1000 PPM; 9192

ISOPROPYL ALCOHOL (SARA III)

CAS: 67-63-0

RTECS: NT8050000

Fraction By Weight: 2%

OSHA PEL400 PPM/500 STEL

ACGIH TLV: 400 PPM/500STEL;9192

METHYL ALCOHOL (METHANOL) (SARA III)

CAS: 67-56-1

RTECS: PC1400000

Fraction By Weight: 1.5%

OSHA PELS,200PPM/250STEL

ACGIH TLV: S,200PPM/250STEL; 93

EPA Report Quantity: 5000 LBS

DOT Report Quantity: 5000 LBS

METHYL ISOBUTYL KETONE (SARA III)

CAS: 108-10-1

RTECS: SA9275000

Fraction By Weight: 0.5%

OSHA PEL100 PPM/75 STEL

ACGIH TLV: 50 PPM/75 STEL; 9293

EPA Report Quantity: 5000 LBS

DOT Report Quantity: 5000 LBS

PROPYLENE GLYCOL MONOMETHYL ETHER

CAS: 107-98-2

RTECS: UB7700000

Fraction By Weight: 2%

OSHA PEL100 PPM/150 STEL

ACGIH TLV: 100 PPM/150STEL;9192

WATER

CAS: 7732-18-5

RTECS: ZC0110000

Fraction By Weight: 74%

Hazards

Effects of Overexposure:INHAL:DROWSINESS;EYES:IRRITATION;SKIN:SLIGHT IRRITATION;INGEST:G.I.IRRITATION,NAUSEA,& LIVER DAMAGE.

First Aid

First Aid:INHALE:REMOVE TO FRESH AIR, GIVE CPR/O*2 IF NEED;EYES/SKIN:FLUSH W LG AMTS H*2O FOR 15 MIN;INGEST:RINSE MOUTH; GET MEDICAL ATTENTION FOR EYES, BREATHING DIFFICULTY, OR OTHER SYMPTOMS OF OVEREXPOSURE.

Fire Fighting

Flash Point:100F (MINIMUM)
Extinguishing Media:USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL.
Fire Fighting Procedures:FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT WHEN FIGHTING CHEMICAL FIRE. USE WATER SPRAY TO COOL NEARBY CONTAINERS EXPOSED TO FIRE.

Unusual Fire/Explosion Hazard:FIRE OR EXCESSIVE HEAT MAY CAUSE PRODUCTION OF HAZARDOUS DECOMPOSITION PRODUCTS.

Accidental Release

Spill Release Procedures:USE PROPER PERSONAL PROTECTION:USE SUITABLE ABSORBENT MATERIAL AND RECOVER FOR PROPER DISPOSAL.

Handling

Handling and Storage Precautions:STORE IN COOL DRY AREA.KEEP AWAY FROM EXTREME HEAT.KEEP CONTAINER CLOSED WHEN NOT IN USE.
Other Precautions:AVOID CONTACT WITH EYES AND SKIN.DO NOT INHALE VAPORS/MIST.

Exposure Controls

Respiratory Protection:USE NIOSH/MSHA APPROVED RESPIRATOR FOR ORG.VAPORS/MIST IF ABOVE TLV.
Ventilation:PROVIDE MECHAN(GEN/LOCAL EXHAUST)VENT TO MAINTN Protective Gloves:IMPERVIOUS
Eye Protection:GOGGLES/FACE SHIELD
Other Protective Equipment:FULL WORK CLOTHING TO PREVENT REPEATED OR PROLONGED CONTACT.
Supplemental Safety and Health

Chemical Properties

HCC:F4
Boiling Pt:B.P. Text:87.0F,30.6C
Vapor Pres:23 @ 20C
Vapor Density:2.87
Spec Gravity:0.97
Evaporation Rate & Reference:1.25
Solubility in Water:COMPLETE
Appearance and Odor:PINK LIQUID WITH AROMATIC ODOR.
Corrosion Rate:N/KNOWN

Stability

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS
Stability Condition to Avoid:HIGH TEMPERATURES, SPARKS, AND OPEN FLAMES
Hazardous Decomposition Products:NONE KNOWN

Disposal

Waste Disposal Methods:DISPOSE OF COLLCTED MATERIAL IN ACCORDANCE WITH LOCAL,STATE AND FEDERAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

1. PRODUCT AND COMPANY IDENTIFICATION

COMMON NAME:	Kearnalex 118 with Grit, Catalogue Number: 30584-3, -25
CHEMICAL NAME:	Proprietary
PRODUCT DESCRIPTION:	Castor Oil Derivative
FORMULA:	Not Available
PRODUCT CAS NO.:	Proprietary
SUPPLIER:	Cooper Industries/Cooper Power Systems
ADDRESS:	3660 South School Avenue
CITY, STATE, ZIP:	Fayetteville, AR 72701
PHONE:	(479) 521-3700 **EMERGENCY PHONE: CHEMTREC (800) 924-9300**

2. HAZARDOUS INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	% WEIGHT	PEL-OSHA	TLV-ACGIH	LD_{50}/LC_{50} ROUTE/SPECIES
Zinc Dust CAS No.: 7440-66-6 FORMULA: Zn	15	15 mg/m^3 (ZnO, total) 5 mg/m^3 (ZnO, respirable)	2 mg/m^3 (ZnO, respirable) 10 mg/m^3 (ZnO, respirable) (STEL)	No Data

OSHA Regulatory Status: As supplied, this product is not considered hazardous under criteria of this rule.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Thick gray abrasive grease with mild odor. May cause mild eye and skin irritation. Inhalation is not expected under normal working conditions. Mists and fumes generated at elevated temperatures may cause irritation. May release diisocyanates and zinc oxide when heated to decomposition temperatures.

POTENTIAL HEALTH EFFECTS

EYE: May cause mild irritation. Abrasive particles present in grease may scratch the surface of the eye causing irritation, redness, and light sensitivity.

SKIN: May cause mild irritation or physical abrasion.

INGESTION: May cause nausea and vomiting or have a strong laxative effect.

INHALATION: Not expected under normal working conditions. Mists and fumes produced at elevated temperatures may cause respiratory irritation and lung effects (See Section 11).

SIGNS AND SYMPTOMS: May cause minor irritation or physical abrasions.

CHRONIC: None known.

POTENTIAL HEALTH EFFECTS (continued):

CARCINOGENICITY: IARC: No NTP: No OSHA: No

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

TARGET ORGANS: None known.

4. FIRST AID MEASURES

EYE: DO NOT RUB THE EYES. Flush eyes with large amounts of lukewarm water for 15 minutes, holding eyelids open to ensure adequate rinsing. If irritation persists, or abrasion is suspected, seek medical attention.

SKIN: Wash skin thoroughly with soap and water. Discard or clean contaminated clothing. If irritation occurs, seek medical attention.

INGESTION: Consult a physician.

INHALATION: Not expected. If mists or fumes from heated product are inhaled, remove to fresh air and give artificial respiration as oxygen if indicated. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES		
FLASH POINT:	> 260 °C/ > 500 °F	
FLAMMABLE LIMITS:	LEL: Not Available	UEL: Not Available
NFPA HAZARD CLASSIFICATION:		
HEALTH: 1	FLAMMABILITY: 1	INSTABILITY: 0

EXTINGUISHING MEDIA: Foam, carbon dioxide, dry chemical.

FIRE AND EXPLOSION HAZARDS: Combustible grease. Lubricant will burn but must be heated before ignition will occur. Thermal decomposition will produce carbon and zinc oxides, hazardous diisocyanates, and other oxidation products.

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear a NIOSH-approved, full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear. Use water to cool fire exposed containers. Continue to cool until after flames are extinguished.

6. ACCIDENTAL RELEASE MEASURES

Isolate area of spill and extinguish ignition sources. Do not walk through spilled material. Use appropriate protective equipment (See Section 8). Wipe or scoop up spilled material and place in a clean container for disposal. Use sand or vermiculite as necessary to absorb excess material. Thoroughly clean area of spill to prevent slipping.

7. HANDLING AND STORAGE

Store in cool area in closed containers. Keep away from heat sources and oxidizing materials. Contact with water for extended periods of time may result in the formation of flammable hydrogen gas. Concentrations may become flammable in enclosed spaces. Do not smoke in work or storage areas. Keep container closed when not in use. Avoid skin and eye contact. Wash thoroughly after handling, before meals and breaks and before leaving the work area. Protect containers from physical damage. Store upright and prevent containers being knocked over. Launder contaminated clothing before re-use and discard clothing that cannot be properly cleaned. DO NOT crush, puncture, heat, incinerate or weld on or near empty or full containers. High temperatures may release diisocyanates, substances that may cause irritation and respiratory sensitization at low concentrations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Under normal working conditions below acceptable exposure guidelines, none required. Respiratory protection depends upon the magnitude of exposure and should be selected in accordance with 29 CFR Part 1910.134.

SKIN PROTECTION: Protective gloves of appropriate material.

EYE PROTECTION: Safety glasses or goggles.

ENGINEERING CONTROLS: General ventilation. Use local exhaust ventilation in areas where product is heated.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Thick gray abrasive grease
ODOR:	Mild
BOILING POINT:	No Data
VAPOR PRESSURE:	Not Applicable
VAPOR DENSITY (Air = 1):	> 1
SOLUBILITY IN WATER:	Insoluble
SPECIFIC GRAVITY:	1.27
MELTING POINT:	No Data
pH:	Essentially neutral
% VOLATILE:	Negligible

10. STABILITY AND REACTIVITY

STABILITY: Stable.

INCOMPATIBLE MATERIALS/CONDITIONS: Incompatible with strong oxidizers. Avoid high temperatures, open flames and prolonged contact with water.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products may include carbon oxides, diisocyanates and other oxidation products.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

INHALATION: No toxicological test data is available for mixture. Grease does not have volatile ingredients and inhalation is not expected under normal working conditions. Grease may give off diisocyanates or zinc oxide at high temperatures. Some diisocyanates may cause irritation and respiratory sensitization. Zinc oxide may cause irritation and brief flu-like illness (metal fume fever) characterized by fever, weakness, and chills.

SKIN AND EYE: Industrial experience indicates product may cause minor irritation.

OTHER: Based on manufacturer's information, product is not expected to be toxic if ingested. Ingestion may have effects similar to those caused by castor oil.

12. ECOLOGICAL INFORMATION

Does not contain Class I or II ozone depleting substances. Specific ecotoxicity values were unavailable. Toxic effects are expected to resemble those seen in humans and test animals.

13. DISPOSAL CONSIDERATIONS

Recycle, reclaim and dispose of in accordance with applicable state, local and federal regulations.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Not Applicable
HAZARD CLASS:	Not Applicable
IDENTIFICATION NUMBER:	Not Applicable
SHIPPING LABEL:	Not Applicable
PACKING GROUP:	Not Applicable

15. REGULATORY INFORMATION

WHMIS CLASSIFICATION: Not Classified

SARA TITLE III – SECTION 313 SUPPLIER NOTIFICATION: This product does not contain ingredients subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

CALIFORNIA PROPOSITION 65: This product does not contain ingredients known to the State of California to cause cancer or reproductive toxicity.

16. OTHER INFORMATION

KEY:

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstracts Service
DOT:	Department of Transportation
IARC:	International Agency for Research on Cancer
MSHA:	Mine Safety and Health Administration
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendment and Reauthorization Act
TDG:	Transportation of Dangerous Goods
TLV:	Threshold Limit Value
WHMIS:	Workplace Hazardous Materials Information System

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Cooper Industries/Cooper Power Systems: Kearnalex 118 without Grit (Cat. No.: 30584-30)

1. PRODUCT AND COMPANY IDENTIFICATION

COMMON NAME:	Kearnalex 118 without Grit, Catalogue Number: 30584-30
CHEMICAL NAME:	Proprietary
PRODUCT DESCRIPTION:	Castor Oil Derivative
FORMULA:	Not Available
PRODUCT CAS NO.:	Proprietary
SUPPLIER:	Cooper Industries/Cooper Power Systems
ADDRESS:	3660 South School Avenue
CITY, STATE, ZIP:	Fayetteville, AR 72701
PHONE:	(479) 521-3700 **EMERGENCY PHONE: CHEMTREC (800) 924-9300**

2. HAZARDOUS INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	% WEIGHT	PEL-OSHA	TLV-ACGIH	LD_{50}/LC_{50} ROUTE/SPECIES
Does not contain hazardous ingredients.				

OSHA Regulatory Status: As supplied, this product is not considered hazardous under criteria of this rule.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Thick light yellow grease with mild odor. May cause mild eye and skin irritation. Inhalation is not expected under normal working conditions. Mists and fumes generated at elevated temperatures may cause irritation. May release diisocyanates when heated to decomposition temperatures.

POTENTIAL HEALTH EFFECTS

EYE: May cause mild irritation.

SKIN: May cause mild irritation.

INGESTION: May cause nausea and vomiting or have a strong laxative effect.

INHALATION: Not expected under normal working conditions. Mists and fumes produced at elevated temperatures may cause respiratory irritation and lung effects (See Section 11).

SIGNS AND SYMPTOMS: May cause minor irritation.

CHRONIC: None known.

CARCINOGENICITY: IARC: No NTP: No OSHA: No

POTENTIAL HEALTH EFFECTS (continued):

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

TARGET ORGANS: None known.

4. FIRST AID MEASURES

EYE: Flush eyes with large amounts of lukewarm water for 15 minutes, holding eyelids open to ensure adequate rinsing. If irritation occurs, seek medical attention.

SKIN: Wash skin thoroughly with soap and water. Discard or clean contaminated clothing. If irritation occurs, seek medical attention.

INGESTION: Consult a physician.

INHALATION: Not expected. If mists or fumes from heated product are inhaled, remove to fresh air and give artificial respiration as oxygen if indicated. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES		
FLASH POINT:	> 260 °C/ > 500 °F	
FLAMMABLE LIMITS:	LEL: Not Available	UEL: Not Available
NFPA HAZARD CLASSIFICATION:		
HEALTH: 1	FLAMMABILITY: 1	INSTABILITY: 0

EXTINGUISHING MEDIA: Foam, carbon dioxide, dry chemical.

FIRE AND EXPLOSION HAZARDS: Combustible grease. Lubricant will burn but must be heated before ignition will occur. Thermal decomposition will produce carbon oxides, hazardous diisocyanates, and other oxidation products.

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear a NIOSH-approved, full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear. Use water to cool fire exposed containers. Continue to cool until after flames are extinguished.

6. ACCIDENTAL RELEASE MEASURES

Isolate area of spill and extinguish ignition sources. Do not walk through spilled material. Use appropriate protective equipment (See Section 8). Wipe or scoop up spilled material and place in a clean container for disposal. Use sand or vermiculite as necessary to absorb excess material. Thoroughly clean area of spill to prevent slipping.

7. HANDLING AND STORAGE

Store in cool area away from heat sources and oxidizing materials. Do not smoke in work or storage areas. Keep container closed when not in use. Avoid skin and eye contact. Wash thoroughly after handling, before meals and breaks and before leaving the work area. Protect containers from physical damage. Store upright and prevent containers being knocked over. Launder contaminated clothing before re-use and discard clothing that cannot be properly cleaned. DO NOT crush, puncture, heat, incinerate or weld on or near empty or full containers. High temperatures may release diisocyanates, substances that can cause irritation and respiratory sensitization at low concentrations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Under normal working conditions below acceptable exposure guidelines, none required. Respiratory protection depends upon the magnitude of exposure and should be selected in accordance with 29 CFR Part 1910.134.

SKIN PROTECTION: Protective gloves of appropriate material.

EYE PROTECTION: Safety glasses or goggles.

ENGINEERING CONTROLS: General ventilation. Use local exhaust ventilation in areas where product is heated.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Thick light yellow grease
ODOR:	Mild
BOILING POINT:	No Data
VAPOR PRESSURE:	Not Applicable
VAPOR DENSITY (Air = 1):	> 1
SOLUBILITY IN WATER:	Insoluble
SPECIFIC GRAVITY:	1.0
MELTING POINT:	No Data
pH:	Essentially neutral
% VOLATILE:	Negligible

10. STABILITY AND REACTIVITY

STABILITY: Stable.

INCOMPATIBLE MATERIALS/CONDITIONS: Incompatible with strong oxidizers. Avoid high temperatures and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products may include carbon oxides, diisocyanates and other oxidation products.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

INHALATION: No toxicological test data is available for mixture. Grease does not have volatile ingredients and inhalation is not expected under normal working conditions. Grease may give off diisocyanates at high temperatures. Some diisocyanates can cause irritation and respiratory sensitization.

SKIN AND EYE: Industrial experience indicates product may cause minor irritation.

OTHER: Based on manufacturer's information, product is not expected to be toxic if ingested. Ingestion may have effects similar to those caused by castor oil.

12. ECOLOGICAL INFORMATION

Does not contain Class I or II ozone depleting substances. Specific ecotoxicity values were unavailable. Toxic effects are expected to resemble those seen in humans and test animals.

13. DISPOSAL CONSIDERATIONS

Recycle, reclaim and dispose of in accordance with applicable state, local and federal regulations.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Not Applicable
HAZARD CLASS:	Not Applicable
IDENTIFICATION NUMBER:	Not Applicable
SHIPPING LABEL:	Not Applicable
PACKING GROUP:	Not Applicable

15. REGULATORY INFORMATION

WHMIS CLASSIFICATION: Not Classified

SARA TITLE III – SECTION 313 SUPPLIER NOTIFICATION: This product does not contain ingredients subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

CALIFORNIA PROPOSITION 65: This product does not contain ingredients known to the State of California to cause cancer or reproductive toxicity.

16. OTHER INFORMATION

KEY:

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstracts Service
DOT:	Department of Transportation
IARC:	International Agency for Research on Cancer
MSHA:	Mine Safety and Health Administration
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendment and Reauthorization Act
TDG:	Transportation of Dangerous Goods
TLV:	Threshold Limit Value
WHMIS:	Workplace Hazardous Materials Information System

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1. PRODUCT AND COMPANY IDENTIFICATION

COMMON NAME:	Kearney Fiberglass Cleaner/Wax (Catalogue Number 131840)
CHEMICAL NAME:	Mixture
PRODUCT DESCRIPTION:	Cleaner/Wax
FORMULA:	Mixture
PRODUCT CAS NO.:	Various
SUPPLIER:	Cooper Industries/Cooper Power Systems
ADDRESS:	3660 South School Avenue
CITY, STATE, ZIP:	Fayetteville, AR 72701
PHONE:	(479) 521-3700 **EMERGENCY PHONE: CHEMTREC (800) 424-9300**

2. HAZARDOUS INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	% WEIGHT	PEL-OSHA	TLV-ACGIH	LD_{50}/LC_{50} ROUTE/SPECIES
Petroleum distillates (Mineral Spirits) CAS No.: 8052-41-3 FORMULA: Not Available	10-30	500 ppm	100 ppm	No Data
Aliphatic Hydrocarbon CAS No: 64742-48-8	5-10	N/EST	N/EST	No Data
Diatomite (Diatomaceous earth) CAS No.: 61790-53-2 FORMULA: No Data	< 12	80 $mg/m^3/\%\ SiO_2$	10 mg/m^3 * (inhalable) 3 mg/m^3 (respirable)	No Data

* Value is for particulate matter containing no asbestos and < 1% crystalline silica. Diatomite may contain < 1% quartz (CAS No.: 14808-60-7) and cristobalite (CAS No.: 14454-46-1). The ACGIH TLV for quartz and cristobalite is 0.5 mg/m^3 (respirable). OSHA has established a PEL of 10 $mg/m^3/(\%\ SiO_2 +2)$ for respirable quartz and 30 $mg/m^3/(\%\ SiO_2 +2)$ for total dust. The OSHA PEL for cristobalite is ½ the value for quartz (See Section 11).

OSHA Regulatory Status: This product is considered hazardous under criteria of this rule.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Combustible pink emulsion with solvent odor. May cause eye, skin, and respiratory irritation. Using this product in a confined space or poorly ventilated area may cause the build-up of high aerosol and vapor concentrations. Inhalation of vapors and aerosols may cause respiratory irritation or have an anesthetic or narcotic effect. May affect the liver and kidneys. Fire and explosion hazard. Avoid heat, sparks, and flame.

POTENTIAL HEALTH EFFECTS

EYE: May cause irritation and redness.

SKIN: May cause irritation and redness. Prolonged or repeated contact may tend to dry or defat the skin causing redness, dermatitis, or cracking.

INGESTION: May cause nausea, vomiting, and narcotic effects. Aspiration of solvent into the lungs during ingestion or from subsequent vomiting may result in dangerous chemical pneumonitis or swelling and fluid retention in the lungs (pneumonitis).

INHALATION: Accumulation of high vapor or aerosol concentrations in poorly ventilated areas may cause respiratory irritation, central nervous system effects, and possibly kidney damage. Continued exposure to high concentrations may be harmful and possibly fatal.

SIGNS AND SYMPTOMS: Most common symptoms include nausea, headache, incoordination, and drowsiness. High concentrations may result in unconsciousness.

CHRONIC: Repeated exposure may adversely affect the CNS, liver and kidney.

CARCINOGENICITY: IARC: Yes NTP: Yes OSHA: No
This product contains crystalline silica (CS), which is considered a hazard by inhalation. IARC has classified inhalation of CS as carcinogenic for humans (Group I). CS is listed by NTP as a substance which may reasonably b anticipated to be a carcinogen. Inhalation of CS is also a know cause of silicosis, a noncancerous lung disease.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: May aggravate pre-existing eye, skin, and respiratory disorders.

TARGET ORGANS: Eyes, skin, respiratory system, CNS, liver, kidneys.

4. FIRST AID MEASURES

EYE: Flush eyes with large amounts of lukewarm water for 15 minutes. If irritation persists, seek medical attention.

SKIN: Remove contaminated clothing and wash skin thoroughly with soap and water. If irritation persists, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING DUE TO ASPIRATION HAZARD. Give 4-8 ounces of water or milk to dilute and seek immediate medical attention. Never give anything by mouth to anyone that is or could rapidly become unconscious. Product is not highly toxic; however, aspiration into the lungs can be harmful or fatal.

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES		
FLASH POINT:	42 °C (107 °F) C.O.C.	
FLAMMABLE LIMITS:	LEL: Not Available	UEL: Not Available
NFPA HAZARD CLASSIFICATION:		
HEALTH: 1	FLAMMABILITY: 2	INSTABILITY: 0

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam or water.

FIRE AND EXPLOSION HAZARDS: Combustible liquid that contains water. Vapors may travel to an ignition source and flash back. Container may vent rapidly or rupture violently from pressure when involved in a fire situation.

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear a NIOSH-approved, full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear. Stop the leak that is supporting fire if it can be done without risk. If fire is in areas where large amounts of product are stored, evacuate to a safe distance in all

directions. Containers may rupture violently from pressure when involved in a fire situation. Use water to cool surrounding containers and continue to cool containers until well after flames are extinguished.

6. ACCIDENTAL RELEASE MEASURES

Extinguish all ignition sources and isolate area of spill. Wear appropriate protective equipment (See Section 8). No smoking, sparks, or open flames in hazard area. Provide maximum explosion proof ventilation to prevent build-up of flammable concentrations. Absorb small spills with suitable inert sorbent material and place in clean, tightly closed container for later disposal. Absorbed material may still be a fire hazard. Handle and dispose accordingly. Dike well ahead of large spills for later recycle or disposal. Use non-sparking tools or pumps to collect solvent. Not expected as product is in an aerosol container. Thoroughly remove residue to prevent slipping. Thoroughly ventilate area to eliminate vapors.

7. HANDLING AND STORAGE

Store in cool area away from heat sources. Do not use or store near heat, sparks, flames, or other ignition sources. Do not smoke in work or storage areas. Keep container tightly closed when not in use. Avoid freezing. Use only with adequate ventilation. Avoid eye contact and repeated or prolonged skin contact. Wash thoroughly after handling, before meals and breaks and before leaving the work area. Protect containers from physical damage. Store upright and prevent containers being knocked over. Empty containers may contain combustible product residue, handle and dispose accordingly. DO NOT crush, puncture, heat, incinerate or weld on or near empty or full containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Under normal working conditions below acceptable exposure guidelines, none required. Respiratory protection depends upon the magnitude of exposure and should be selected in accordance with 29 CFR Part 1910.134.

SKIN PROTECTION: Protective gloves of nitrile rubber.

EYE PROTECTION: Safety goggles to prevent irritation.

ENGINEERING CONTROLS: General ventilation used in combination with local exhaust as necessary to control air contaminants at or below acceptable exposure guidelines. If product is handled routinely where release may occur, all electrical equipment should be rated for use with Class II combustible liquids. Consult the National Electrical Code for further information.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Pink emulsion
ODOR:	Typical solvent
BOILING POINT:	100 °C (212 °F)
VAPOR PRESSURE:	No Data
VAPOR DENSITY (Air = 1):	No Data
SOLUBILITY IN WATER:	Miscible
SPECIFIC GRAVITY:	1.0031
MELTING POINT:	No Data
pH:	9
VOC Content:	137 grams/liter

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBLE MATERIALS/CONDITIONS: Avoid heat, sparks, and flame.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and various hydrocarbons including formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

INHALATION: Fifteen young adult male volunteers (ages 20-34 years) complained of nausea and vertigo following inhalation of 440-875 ppm white spirits. Inhalation of 1400 ppm caused death of 1 of 15 rats in 8 hours. Cats and beagles that inhaled approximately the same concentration exhibited convulsions, tremors, and died after 2.5-7.5 hours exposure. Single cases of acute liver and bone marrow toxicity have been reported following exposure to high levels; however, lack of details makes the relevance of these findings unclear.

SKIN AND EYE: Irritation was reported in all six volunteers exposed to concentrations of 470 ppm for 15 minutes. Repeated skin contact will dry or defat the skin causing irritation, cracking and redness.

OTHER: Rats exposed to 330 ppm solvent for 65 days (5 days/week, 6 H/day) exhibited evidence of renal damage. Repeated dermal exposure (2000 mg/kg; 3 times/week for 4 weeks) of rabbits has caused reduced weight gain and liver toxicity.

Diatomatite may contain < 1% crystalline silica. Exposure is not expected as this product is a liquid and low concentrations are present. Repeated inhalation of crystalline silica over time may cause progressive fibrotic lung disease and increase the risk of developing respiratory cancer.

12. ECOLOGICAL INFORMATION

Does not contain Class I or II ozone depleting substances. Specific ecotoxicity values were unavailable. Toxic effects are expected to resemble those seen in humans and test animals.

13. DISPOSAL CONSIDERATIONS

Recycle, reclaim and dispose of in accordance with applicable state, local and federal regulations.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Cleaning liquid (Contains Petroleum Spirits)
HAZARD CLASS:	Combustible Liquid
IDENTIFICATION NUMBER:	UN1993
SHIPPING LABEL:	Combustible Liquid
PACKING GROUP:	III

15. REGULATORY INFORMATION

WHMIS CLASSIFICATION: B3, D2B

SARA TITLE III – SECTION 313 SUPPLIER NOTIFICATION: This product does not contain ingredients subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

CALIFORNIA PROPOSITION 65: This product may contain crystalline silica, an ingredient known to the State of California to cause cancer.

16. OTHER INFORMATION

KEY:

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstracts Service
DOT:	Department of Transportation
IARC:	International Agency for Research on Cancer
MSHA:	Mine Safety and Health Administration
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendment and Reauthorization Act
TDG:	Transportation of Dangerous Goods
TLV:	Threshold Limit Value
WHMIS:	Workplace Hazardous Materials Information System

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name: KIMCARE General* Pink Lotion Soap; Kimberly Clark® Professional Pink Lotion Soap

Product Number: 91220, 91300, 91302, 91303, 91923

Date Prepared:	7/18/2004
	Kimberly-Clark Corporation 1400 Holcomb Bridge Road Roswell, GA 30076-2199 United States of America
Telephone: MEDICAL EMERGENCY TRANSPORTATION EMERGENCY INFORMATION	 1-877-561-6587 Chemtrec 1-800-424-9300 1-888-346-4652

Product Use: Skin/personal cleansing

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	*CAS-No./ EINECS-No*	*%*	*EU Classification (67/548/EEC):*
Non-Hazardous Ingredients	Proprietary	100%	Not applicable

See Section 16 for further information on EU Classification.

3. HAZARDS IDENTIFICATION

Emergency Overview: Clear pink gel with a peach scent. May cause mild eye irritation. This product is intended for use as a hand cleanser and is expected to contact the skin. No unusual hazards expected.

EU Classification (1999/45/EC): Not classified as a dangerous substance or preparation.

Medicinal and cosmetic products in the finished form, intended for the final user are not subject the Directive relating to the classification, packaging and labelling of dangerous preparations (1999/45/EC).

US OSHA Classification (29CFR1910.1200): Not Hazardous

Canadian WHMIS Classification: Not a controlled product.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Seek medical advice if cough, shortness of breath or other respiratory problems occur.

Skin contact: Wash off excess with water. This product is intended for use on the skin. Seek medical advice if redness, swelling, itching or burning occurs.

Eye contact: Rinse immediately with plenty of water, also under the eyelids. Obtain medical attention if irritation persists.

Ingestion: Call a physician or Poison Control Centre immediately. Do not induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flashpoint: Not applicable

Flammable Limits in Air % by Volume:

LEL (Lower): Not applicable

UEL (Upper): Not applicable

Suitable Extinguishing Media: Water, water fog, foam, carbon dioxide, dry chemical.

Special Fire Fighting Procedures: Not required.

Unusual Fire and Explosion Hazards: None.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Clean up excess material and place in container for reclaim, recycle or disposal. Comply with all federal, state and local regulations.

7. HANDLING AND STORAGE

Avoid contact with eyes. Avoid sparks, flame and excessive heat.

Recommended storage temperature <104°F (40°C).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)

Chemical Name	Exposure limit(s)
Non-Hazardous Ingredients	None established

Ventilation: No special ventilation normally required.

Respiratory Protection: No personal respiratory protective equipment normally required.

Protective Gloves: Not required. This product is intended to come in contact with the skin.

Eye Protection: None required for normal use.

For bulk processing, regular hand washing along with general body-covering clothing, safety goggles and gloves are recommended as good industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor	Clear pink gel with a peach scent.
Boiling point/range	>212°F (>100°C)
Melting point/range	Not available
Specific Gravity (water=1)	1.010-1.020
Vapor pressure	<18 mmHg
Vapor density (air=1)	Not available
Solubility	Complete
pH	6.0
Partition coefficient (n-octanol/water):	Not available
Evaporation Rate (Butyl acetate=1)	Not available
Percent Volatile by Volume (%)	93.8%
Volatile Organic Carbon Compounds (VOC) (g/L)	Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: None currently known.

Materials to avoid: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

Symptoms/Effects of Overexposure:

Inhalation: None expected.

Skin contact: Prolonged skin contact may cause mild irritation in sensitive individuals. Patch testing does not indicate a potential for dermal irritation in humans. Not expected to be a sensitizer.

Eye contact: May cause mild irritation.

Ingestion: Not intended for ingestion, however, no unusual hazards expected.

Chronic toxicity: None currently known.

Medical Conditions Aggravated by Exposure: None currently known.

Carcinogenicity Data: None of the components of this product is listed as a carcinogen by IARC, NTP, US OSHA or the European Directive (67/48/EEC).

Reproductive Toxicity: None currently known.

Acute Toxicity Values: Product: Oral LD50 (rat) >5 g/kg

12. ECOLOGICAL INFORMATION

No data is currently available.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all state, local and federal regulations.

14. TRANSPORT INFORMATION

US DOT Shipping Description: Not regulated

IATA Shipping Description (Air): Not regulated

IMDG Shipping Description (Vessel): Not regulated

15. REGULATORY INFORMATION

US Regulations

EPA Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA Inventory or exempted from TSCA.

SARA 302 Listed Chemicals: None.

SARA 311/312 Hazard Categories: Not applicable

SARA 313 This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under the SARA Section 313 (40 CFR 372): None.

California Proposition 65: This product does not contain chemicals listed per the Safe Drinking Water and Toxic Enforcement Act of 1986.

International Regulations

Canadian WHMIS Classification: Not a controlled product.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU Labeling: None.

16. OTHER INFORMATION

HMIS Rating: Health 0 Fire 0 Reactivity 0

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):
None.

The information contained herein is true and correct to the best of Kimberly-Clark's knowledge. However, no warranty, express or implied, is made. Nothing herein should be interpreted as a recommendation to infringe existing patents or violate any laws or regulations. Final determination of the suitability of the material is the sole responsibility of the user.

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	HCS
	WHMIS CLASS E: Corrosive liquid. Controlled under the Pest Control Products Act (PCP) WHMIS CLASS D-1: Material causing immediate and serious toxic effects.	HCS CLASS: Corrosive liquid.

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	**Kling** ✓
Synonym	Disinfectant Cleaner For Porcelain/Toilet Bowls/Urinals
Chemical Family	Not available.
Chemical Formula	Not applicable.
Manufacturer/ Supplier	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607 (419) 241-2156
TSCA	**TSCA Inventory: All components listed or are exempt from listing.**
DSL	**DSL : All components listed unless noted elsewhere on this MSDS**

Code	75
CAS #	Not applicable.
Validation Date	**7/22/2003**
Print Date	7/28/2003
In Case of Emergency	Chemtrec (800) 424-9300

Protective Clothing

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC_{50}/LD_{50}
1) Water	7732-18-5	>69	Not available.	Not available.
2) Hydrochloric Acid	7647-01-0	9	STEL: 5	Not available.
3) Nonionic Surfactant	9016-45-9	0-5	Not available.	Not available.
4) Xanthan Gum	11138-66-2	0-5	Not available.	ORAL (LD50): Acute: 5000 mg/kg [Rat].
5) Perfume Oil	119-36-8	0-5	Not available.	Not available.
6) Nonionic Surfactant	66455-15-0	0-5	Not available.	Not available.
7) Amphoteric Surfactant	68298-20-4	0-5	Not available.	Not available.
8) Citric Acid	77-92-9	0-5	Not available.	Not available.
9) Dye	N/A	0-5	Not available.	Not available.
10) Quaternary Ammonium Chloride	68424-95-3	0.051	Not available.	Not available.

Section 3. Hazards Identification

Potential Acute Health Effects	Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death.
Potential Chronic Health Effects	Severe over-exposure can result in death.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Hold eye open and rinse slowly and thoroughly with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor immediately for treatment advice.
Skin Contact	Remove contaminated clothing and shoes. Rinse skin with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for further treatment advice.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration., preferably mouth to mouth if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center immediately for treatment advice. Have person sip a glass of water if able to swallow. Do NOT induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

Section 5. Fire Fighting Measures

Products of Combustion	Not available.
Fire Fighting Media and Instructions	N/A
Special Remarks on Fire Hazards	N/A
Special Remarks on Explosion Hazards	N/A

Section 6. Accidental Release Measures

Small Spill and Leak	Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill and Leak	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 7. Handling and Storage

Precautions	DANGER! Avoid contact with skin and eyes. DO NOT ingest.
Incompatibility	Strong alkalis, most metals, bleach.
Storage	Corrosive materials should be stored in a separate safety storage cabinet or room. Keep out of reach of children. For Institutional and Commercial Use

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient to control airborne levels.
Personal Protection	
Eyes	Splash goggles.
Body	Long Pants and Long Sleeves to avoid skin cotact.
Respiratory	Wear appropriate respirator when ventilation is inadequate.
Hands	Gloves (impervious).
Protective Clothing (Pictograms)	

Exposure Limits	**Hydrochloric Acid** STEL: 5 Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
pH	<1.5 [Acidic.]
Boiling/Condensation Point	214°F initial
Melting/Freezing Point	Not available.
Critical Temperature	Not available.
Instability Temperature	Not available.
Specific Gravity	1.05 (Water = 1)
Vapor Pressure	25mm Hg @ 68°F
Vapor Density	>1 (Air = 1)
Volatility	95
VOC	Not available.
Evaporation Rate	<1
Dispersion Properties	Dispersed in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.
Solubility	Easily soluble in cold water.
The Product is:	May be combustible at high temperature.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.
Explosion Hazards in Presence of Various Substances	No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.

Odor	Pleasant.
Taste	Not available.
Color	Blue.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Strong alkalis, most metals, bleach.
Hazardous Decomposition Products	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Eye Contact Ingestion. INHALATION Skin contact.
Toxicity to Animals	Acute oral toxicity (LD50): 5000 mg/kg [Rat]. (Xanthan Gum).
Acute Effects on Humans	
Eyes	Corrosive to eyes on contact. Eye contact can result in corneal damage or blindness.
Skin	Corrosive to eyes and skin. Skin contact may produce burns.
Inhalation	Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Irritating to the mucous membranes of the nose, thorat and lungs.
Ingestion	May be fatal if swallowed. May cause burns to mouth, throat and stomach.
Chronic Effects on Humans	Severe over-exposure can result in death.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.

Section 14. Transport Information

DOT (U.S.A) (Pictograms)

TDG Classification 8

PIN UN, Proper Shipping Name, PG Shipping name: Corrosive liquids n.o.s. UNNA: 1760 PG: II

Maritime Transportation Not available.

Special Provisions for Transport Not available.

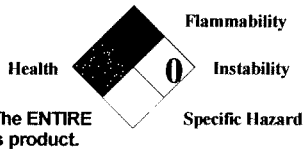
Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification)	WHMIS CLASS E: Corrosive liquid. Controlled under the Pest Control Products Act (PCP) WHMIS CLASS D-1: Material causing immediate and serious toxic effects.	
Regulatory Lists	No products were found.	
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).	
Other Classifications	**HCS (U.S.A.)**	HCS CLASS: Corrosive liquid.
	USA Regulatory Lists	California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Ethylene Oxide <1 ppm California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Ethylene Oxide <1 ppm Massachusetts RTK: Ethylene Oxide SARA 302/304/311/312 hazardous chemicals: Hydrochloric Acid SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Hydrochloric Acid
	DSD (EEC)	
	International Regulations Lists	No products were found.

Hazardous Material Information System (U.S.A.)

Health	3
Flammability	0
Physical Hazard	0

National Fire Protection Association (U.S.A.)



The Hazard Ranking systems presented on this MSDS provide only a quick reference for hazard information. The ENTIRE MSDS must be consulted to determine any specific hazards, First Aid measures, and PPE associated with this product.

Section 16. Other Information

Validated by CRushton on 7/22/2003.

Verified by CRushton.

Printed 7/28/2003.

Information Contact **Betco Corporation**
1001 Brown Avenue
Toledo, Ohio 43607

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Continued on Next Page

SAFETY DATA SHEET

Plant Food Systems, Inc.

KPHITE® RX

EPA Reg. No 73806-1

Section 1—Identification

Product	**Kphite® RX**
Manufacturer	Plant Food Systems, Inc
Address:	2827 Union Street, Zellwood, FL 32798/P.O. Box 775, Zellwood, FL 32798
Phone:	(407) 889-7755 (800) 343-7775
24 Hour Emergency Contact	**CHEM TRAC (800) 424-9300**
Uses	Fungicide Bactericide

Section 2—Hazard Identification

Hazard Product is not hazardous under normal conditions

Section 3—Composition

Ingredients	Components	CAS. No	Classification (GHS-US)
	Phosphorous Acid	13598-36-2	Skin Corr. 1B
	Potassium Hydroxide	1310-58-3	Acute Tox. 4 (oral)
			Skin Corr. 1A

Section 4—First Aid Measures

Inhalation	Generally not considered hazardous. If vapors or mist cause irritation or distress, remove to fresh air.
Skin Contact	Protect skin from contact. May cause irritation. Flush skin thoroughly with water. If irritation persists, get medical attention.
Eye Contact	Avoid contact with eyes. Flush eyes immediately and thoroughly with water for 15 minutes. If Irritation persists get medical attention.
Ingestion	If ingested, do not induce vomiting, consult a physician immediately.
Chronic Health Hazards	No known chronic health hazards.

Section 5—Fire Fighting Measures

Fire Fighting Procedures Dry Chemical, Carbon Dioxide, Foam, Water Class BC, ABC Fire Extinguisher

Section 6—Accidental Release Measure

Personal Precautions	Avoid splashing. Prevent exposure to spilled material with the use of proper PPE. Avoid breathing mist or vapor.
Protective Equipment	PPE should include gloves, goggles, face shield, and level D coverall

Section 6—Accidental Release Measure continued

Containment	Contain all spills and leaks to prevent discharge into the environment. If spilled, use appropriate absorbent material to absorb the spilled material and flush spilled area with water.

Section 7—Safe Handling and Storage

Precautions for Safe Handling and Storage	Store in a well ventilated cool dry place. Wash thoroughly after handling. Avoid overheating or freezing. Do not mix other materials in container.
Incompatibility	Strong oxidizers and reactive materials

Section 8—Exposure Controls/Personal Protection

Potassium Hydroxide (1310-58-3)	USA ACGIH	ACGIH Ceiling (mg/m^3)	2 mg/m^3

Engineering Controls	Eyewash facilities should be available
Personal Protective Equipment	Eyes-Chemical safety goggles or safety glasses Hands-Chemical resistant/impervious gloves Respiratory-None required under normal conditions.
Other information	Do not eat, drink or smoke during use

Section 9—Physical and Chemical Properties

Appearance and Odor	Clear, colorless, odorless liquid		
Boiling Point	Over 212°F	**Specific Gravity**	1.50
Freezing Point	<32°F	**Molecular Weight**	N/A
Vapor Density	Estimated Lighter then air	**Water Reactive**	N/A
Gallons per Ton	160	**Evaporative Rate**	N/A
Solubility in Water	Complete	**pH**	6.8-7.2
Flash Point	N/A	**Flammability**	N/A

Section 10—Stability and Reactivity

Reactivity	Product is not reactive under normal conditions
Stability	Product is stable under normal conditions
Hazardous Reactions	Hazardous polymerization will not occur
Conditions to Avoid	Elevated temperatures may cause container to rupture
Hazardous Decomposition Products	Phosphorous oxides, phosphine

Section 11—Toxicology Information

Routes of Exposure	Inhalation, ingestion, or skin/eye absorption
Symptoms and Signs of Exposure	Eyes & skin slightly irritating. Inhalation is not generally considered hazardous Ingestion may irritate or burn throat and may cause nausea or vomiting.
Long Term Effects	No known long term effects.
Toxicity	No limits have been set for this material.
Carcinogen	Has not been classified for its carcinogenic potential

Section 12—Ecological Information

Water	Low concentrations are not toxic to fish or other aquatic organisms.

Section 13—Disposal Considerations

Waste	This material is not considered a hazardous waste. Disposal must be done in accordance with local, state, and federal environmental regulations. Place waste in an appropriate container with correct labeling.

Section 14—Transport Information

DOT	Material is not hazardous as defined by 49 CFR 172.101 by the US Department of Transportation.
IMDG	This material is not classified as a Dangerous Good per the IMDG Code.

Section 15 — Regulatory Information

United States-SARA Hazardous Category	This product has been reviewed according to the EPA Hazard Categories promulgated under Section 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act (SARA) and is considered, under applicable definitions, to meet the following categories **Fire-**No **Pressure-**No **Reactive-**No **Chronic-**No

Section 16—Other Information

Date of Revision	May 2015 revision prepared in accordance with 29 CFR 1910.1200 Appendix D to meet Global Harmonization Standards.
Disclaimer	The information contained in this SDS refers only to the specific material designated and does not regulate to any process or use with any other material. The information is furnished free of charge and is based on data believed to be accurate and reliable as of the date hereof. It is intended for use by persons possessing technical knowledge at their own discretion and risk. Since actual use is beyond our control, no warranty, expressed or implied, and no liability is assumed by Plant Food Systems, Inc. in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents. Plant Food Systems, Inc. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

Safety Data Sheet

Material Name: Krazy Glue All Purpose Gel

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Elmer's Products Inc.
460 Polaris Parkway
Westerville, OH 43082

Phone: 1-888-435-6377

Emergency # 1-888-516-2502

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Skin Irritation - Category 2
Eye Irritation - Category 2
Carcinogenicity - Category 2
Hazardous to the Aquatic Environment Acute - Category 1

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

Danger

Hazard Statements

Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
Very toxic to aquatic life.

Precautionary Statements

Prevention

Wash thoroughly after handling.
Wear protective gloves/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid release to the environment.

Response

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Collect spillage.

Storage

Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international/regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
7085-85-0	Ethyl cyanoacrylate	85-95
68611-44-9	Silane, dichlorodimethyl-, reaction products with Silica	4-8
9011-14-7	Methyl methacrylate polymer	1-5
25322-69-4	Polypropylene glycol	<1
123-31-9	Hydroquinone	<0.1

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

If eye contact occurs, hold eyelid open and rinse thoroughly but gently with only water for 15 minutes and GET MEDICAL ATTENTION. Do not use any solvents to flush the eye and its surroundings. Liquid glue will sting eye temporarily. Solidified glue may irritate eye like a grain of sand and should be treated by an eye doctor.

First Aid: Skin

If skin bonding occurs, soak in nail polish remover or acetone and carefully peel or roll skin apart (do not pull).

First Aid: Ingestion

If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.

First Aid: Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Keep away from heat and flame.

Hazardous Combustion Products

Oxides of carbon.

Extinguishing Media

In case of fire, use water spray, dry chemical, foam or CO2. Use water to keep fire-exposed containers cool.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Stop the flow of material, if this is without risk.

Materials and Methods for Clean-Up

Eliminate all ignition sources. Sweep (scoop) up and remove to a chemical disposal area.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

None

Environmental Precautions

Prevent entry into natural bodies of water.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Wash thoroughly after handling.

Storage Procedures

Keep away from amines. Store in cool, dry area away from sun and heat. Keep containers tightly closed. Exposure to small amounts of moisture, even moisture in air, causes polymerization and renders the product unusable. Keep away from heat, sparks, flame and other ignition sources.

Incompatibilities

Water, alcohols, amines, bases and direct UV.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Ethyl cyanoacrylate (230-391-5)

ACGIH:	0.2 ppm TWA
Austria:	2 ppm TWA [TMW]; 9 mg/m3 TWA [TMW]
Belgium:	0.2 ppm TWA; 1.04 mg/m3 TWA
Denmark:	2 ppm TWA; 10 mg/m3 TWA
Finland:	0.2 ppm TWA; 1 mg/m3 TWA
Ireland:	0.2 ppm TWA
Portugal:	0.2 ppm TWA [VLE-MP]
Spain:	0.2 ppm TWA [VLA-ED]
Sweden:	2 ppm LLV; 10 mg/m3 LLV
	4 ppm STV; 20 mg/m3 STV

Hydroquinone (204-617-8)

ACGIH:	1 mg/m3 TWA
	Sensitizer
Austria:	4 mg/m3 STEL [KZW] (inhalable fraction, 8 X 5 min)
	2 mg/m3 TWA [TMW] (inhalable fraction)
	Sensitizer
Belgium:	2 mg/m3 TWA
Denmark:	2 mg/m3 Ceiling
Finland:	2 mg/m3 STEL
	0.5 mg/m3 TWA
France:	2 mg/m3 TWA [VME]
Greece:	4 mg/m3 STEL
	2 mg/m3 TWA
Ireland:	0.5 mg/m3 TWA
Portugal:	2 mg/m3 TWA [VLE-MP]
Spain:	2 mg/m3 TWA [VLA-ED]
	sensitizer
Sweden:	0.5 mg/m3 LLV
	1.5 mg/m3 STV

Engineering Measures

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

Personal Protective Equipment: Respiratory

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

Personal Protective Equipment: Hands

Wear appropriate chemical resistant gloves.

Personal Protective Equipment: Eyes

Use goggles if contact is likely.

Personal Protective Equipment: Skin and Body

Wear appropriate chemical resistant clothing.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Colorless gel	**Odor:**	Irritating
Physical State:	liquid	**pH:**	ND
Vapor Pressure:	0.13 mm Hg @ 20°C	**Vapor Density:**	>1
Boiling Point:	62°C	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	1.09
Freezing Point:	<-20°C	**Evaporation Rate:**	<1
VOC:	ND	**Octanol/H2O Coeff.:**	ND
Flash Point:	83°C	**Flash Point Method:**	CC
Upper Flammability Limit (UFL):	ND	**Lower Flammability Limit (LFL):**	ND
Burning Rate:	ND	**Auto Ignition:**	485°C

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

Normally stable, but may become unstable at high temperatures or may react with water.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Exposure to heat, flame and incompatibles.

Incompatible Products

Water, alcohols, amines, bases and direct UV.

Hazardous Decomposition Products

Oxides of carbon.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

None anticipated under normal product use conditions.

B: Component Analysis - LD50/LC50

Ethyl cyanoacrylate (7085-85-0)

Oral LD50 Rat >5 mL/kg

Polypropylene glycol (25322-69-4)

Oral LD50 Rat >2 g/kg

Hydroquinone (123-31-9)

Oral LD50 Rat 320 mg/kg; Dermal LD50 Rat >900 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Bonds skin instantly. Causes irritation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Bonds eyelids instantly. Causes irritation.

Potential Health Effects: Ingestion

This product is not reported to have any ingestion hazards.

Potential Health Effects: Inhalation

May be harmful if inhaled. Vapor may cause irritation of nose, throat and lungs.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have skin sensitization effects.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

B: Component Carcinogenicity

Methyl methacrylate polymer (9011-14-7)

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Hydroquinone (123-31-9)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specified target organ single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specified target organ repeat exposure effects.

Aspiration Respiratory Organs Hazard

This product is not reported to have any aspiration hazards.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Very toxic to aquatic life.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Hydroquinone (123-31-9)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	0.044 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	0.044 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	0.1-0.18 mg/L [static]
96 Hr LC50 Brachydanio rerio	0.17 mg/L
120 Hr EC50 Desmodesmus subspicatus	13.5 mg/L
72 Hr EC50 Pseudokirchneriella subcapitata	0.335 mg/L
48 Hr EC50 Daphnia magna	0.29 mg/L

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

IATA Information

Shipping Name: Not Regulated

ICAO Information

Shipping Name: Not Regulated

IMDG Information

Shipping Name: Not Regulated

* * * Section 15 - Regulatory Information * * *

Regulatory Information

EU MARKING AND LABELLING:

Symbol(s):

Xi

Risk Phrases:

R36/37/38 Irritating to eyes, respiratory system and skin.

Substance Analysis - Inventory

Component/CAS	EC #	EEC	CAN	TSCA
Ethyl cyanoacrylate 7085-85-0	230-391-5	EINECS	DSL	Yes
Silane, dichlorodimethyl-, reaction products with Silica 68611-44-9	271-893-4	EINECS	DSL	Yes
Methyl methacrylate polymer 9011-14-7	618-466-4	No	DSL	Yes
Polypropylene glycol 25322-69-4	500-039-8	No	DSL	Yes
Hydroquinone 123-31-9	204-617-8	EINECS	DSL	Yes

* * * Section 16 - Other Information * * *

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

End of Sheet

Material Safety Data Sheet

MSDS ID: SK-117D

* * * Section 1 - Chemical Product and Company Identification * * *

Product Name: KRESTO® & KRESTO® Heavy Duty Hand Cleaner

Product Use: Hand Cleanser

Manufacturer Information

Evonik Stockhausen, LLC **2401 Doyle Street** **Greensboro , NC 27406**	Non-Emergency # 800-242-2271 **Emergency # (800) 424-9300 CHEMTREC (North America)** **Emergency # (703) 527-3887 CHEMTREC (International, call collect)**

Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving the product. All Non-emergency questions should be directed to the Toll Free, Non-Emergency number above.

* * * Section 2 - Hazards Identification * * *

Emergency Overview

No particular hazards known.

Potential Health Effects: Eyes

This product may cause slight irritation to the eyes.

Potential Health Effects: Skin

None.

Potential Health Effects: Ingestion

Seek medical attention.

Potential Health Effects: Inhalation

Prolonged inhalation may cause irritation and respiratory tract discomfort.

HMIS Ratings: **Health:** 1 **Fire:** 1 **Reactivity:** 0 **Pers. Prot.:** None required.
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

* * * Section 3 - Composition / Information on Ingredients * * *

Component Information/Information on Non-Hazardous Components

This product is a cosmetic intended for personal use in the workplace and is thus regulated by FDA.
See container label regarding proper handling and use of this product.
Ingredients are listed in descending order of concentration on the container label.
For OSHA workplace hazards, investigate and read and understand component MSDS's before manufacturing.
Toxic Substances Control Act (TSCA): Exempt
Workplace Hazardous Materials Information System (WHIMS-Canada): Exempt-cosmetic hand cleanser

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

In case of contact, immediately flush eyes with large amounts of water, continuing to flush for 15 minutes. If irritation persists get medical attention.

First Aid: Skin

Intended as a cosmetic hand cleaner.

First Aid: Ingestion

If material is swallowed, get medical attention or advice.

First Aid: Inhalation

If symptoms are experienced, remove source of contamination or move victim to fresh air.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

None.

Upper Flammable Limit (UFL): Not determined
Lower Flammable Limit (LFL): Not determined
Method Used: Estimated
Flash Point: >200°F
Flammability Classification: Not Determined
Auto Ignition: Not determined

Hazardous Combustion Products

None identified.

Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog.

Fire Fighting Equipment/Instructions

Firefighters should wear self-contained air supplied breathing apparatus in enclosed areas or in areas of heavy smoke or fumes.

NFPA Ratings: Health: 1 **Fire:** 1 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

* * * Section 6 - Accidental Release Measures * * *

Containment Procedures

Absorb spill with inert material.

Clean-Up Procedures

Absorb spill with inert material. Shovel material into appropriate container for disposal. Flush small residuals to the drain for normal biological wastewater treatment.

Evacuation Procedures

None.

Special Procedures

None.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep container closed. See container label for proper use.

Storage Procedures

Protect from freezing or extreme heat.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

A: General Product Information

FDA regulated. For OSHA workplace hazards, investigate and read and understand component MSDS's before manufacturing.

B: Component Exposure Limits

No information is available.

Engineering Controls

None necessary.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Avoid eye contact.

Personal Protective Equipment: Skin

None.

Personal Protective Equipment: Respiratory

Not required for product end use.

Personal Protective Equipment: General

Obey reasonable safety precautions and practice good housekeeping.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Beige paste	**Odor:**	perfume fragrance (0.1-1%)
Physical State:	liquid (Emulsion)	**pH:**	5.2-5.8
Vapor Pressure:	0.07 mm Hg	**Vapor Density:**	Not Established
Boiling Point:	>212 °F	**Melting Point:**	32° F
Solubility (H2O):	approximately 25% soluble in water	**Specific Gravity:**	1.05 g/cc^3
Evaporation Rate:	<1	**Flash Point:**	>200^{o}F (Estimated)
		Percent Volatile:	0% (Federal); LVP-VOC only (California

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

Stable under usual application conditions.

Chemical Stability: Conditions to Avoid

None.

Incompatibility

None identified.

Hazardous Decomposition

None identified.

Hazardous Polymerization

Hazardous polymerization will not occur.

* * * Section 11 - Toxicological Information * * *

Acute and Chronic Toxicity

A: General Product Information

Adverse effects on human health are not to be expected in normal use.

B: Acute Toxicity-LD50/LC50

No LD50/LC50's are available for this product's components.

Carcinogenicity

A: General Product Information

Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.

B: Component Carcinogenicity

No information is available.

Other Toxicological Information

None.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

No information available.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No information available,

Environmental Fate

No information available.

* * * Section 13 - Disposal Considerations * * *

US EPA Waste Number & Descriptions

A: General Product Information

Controlled release of diluted product into a biological wastewater treatment plant.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

* * * Section 14 - Transportation Information * * *

International Transportation Regulations

This product is not regulated as a hazardous material by the United States (DOT) or Canadian (TDG) transportation regulations.

* * * Section 15 - Regulatory Information * * *

US Federal Regulations

A: General Product Information

Not regulated under the Clean Air Act, Not subject to TSCA regulation. Regulated as a personal use cosmetic by FDA.

B: Clean Air Act

No information is available.

C: Component Analysis

No information is available.

D: Food & Drug Administration

None of the components in this product are listed by the FDA under regulations for Direct and Indirect Food Additives.

State Regulations

A: General Product Information

California: Volatiles are LVP –VOC's, fragrance is <2% exempt.

B: Component Analysis - State

None of this product's components are listed on the state lists from CA, FL, MA, MN, NJ, or PA.

Component Analysis - WHMIS IDL

Bronopol @ < 0.1% (CAS # 52-51-7) is listed in the WHMIS IDL.

* * * Section 16 - Other Information * * *

Other Information

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

MSDS History

This is a revised MSDS. Section's 2 & 3 have been revised to reflect proposed 2004 ANSI Standards format recommendations for 2007 implementation.

1/14/09 Reviewed with no changes.

Key/Legend

LVP-VOC: Low Vapor Pressure -Volatile Organic Compound (California)

Contact: Product Compliance Officer

Contact Phone: (800) 242-2271

This is the end of MSDS #: SK-117D

MATERIAL SAFETY DATA SHEET

339
02 00

DATE OF PREPARATION
Dec 26, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
339
PRODUCT NAME
KRYLON® Industrial TOUGH COAT™ Rust Control Primer, Red Oxide
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
14	74-98-6	**Propane**		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
13	106-97-8	**Butane**		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
19	108-88-3	**Toluene**		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
8	67-56-1	**Methanol**		
		ACGIH TLV	200 ppm (Skin)	92 mm
		ACGIH TLV	250 ppm (Skin) STEL	
		OSHA PEL	200 ppm (Skin)	
		OSHA PEL	250 ppm (Skin) STEL	
22	67-64-1	**Acetone**		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
6	14807-96-6	**Talc**		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes

Health	3
Flammability	3
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	1.0	36.5	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.66 lb/gal	797 g/l
SPECIFIC GRAVITY	0.80	
BOILING POINT	<0 - 238 °F	<-18 - 114 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	90%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 55.98% Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene			
		LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
67-56-1	Methanol			
		LC50 RAT	4HR	64000 ppm
		LD50 RAT		5630 mg/kg
67-64-1	Acetone			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
14807-96-6	Talc			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U, ADR (D)

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	19	
67-56-1	Methanol	8	
	Zinc Compound	4	1.7

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product:	LEMON FRESH CLOROX® DISINFECTING WIPES
Description:	MOISTENED TOWELETTE WITH CITRUS FRAGRANCE

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. No. 5813-58	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300

II Health Hazard Data

Eye Contact: Can cause moderate eye irritation.
Ingestion: Liquid should be practically non-toxic if ingested.
Skin Contact: Prolonged skin contact may produce minor irritation.

FIRST AID: EYES- Flush with plenty of water. Call a physician if irritation persists. IF SWALLOWED- Drink a glassful of water. Call a physician or poison control center. SKIN- Wash thoroughly with soap and water after handling. INHALATION- If breathing is effected, move to fresh air.

Under normal consumer use conditions the likelihood of any adverse health effects are low.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
n-Alkyl (C14, 60%; C16, 30% C12, 5%; C18, 5%) dimethyl-benzyl ammonium chloride	0.145%	Not established
n-Alkyl(C12, 68%, C14, 32%) Dimethyl Ethylbenzyl ammonium chloride	0.145%	Not established
Isopropanol CAS #67-63-0	1- 5%	200 ppm/400 ppm[1] 400 ppm[2]

[1]TLV-TWA- Threshold Limit Value-Time Weighted Average.
STEL- Short Term Exposure Limit
[2]PEL- OHSA Permissible Exposure Limit

None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen lists.

IV Special Protection and Precautions

No special protection or precautions have been identified for using this product under directed consumer use conditions.

The following recommendations are given for production facilities and for other conditions and situations where there is increased potential for accidental, large-scale or prolonged exposure.

Hygienic Practices- Wear safety glasses. Use rubber or nitrile gloves if in contact liquid, especially for prolonged periods.
Engineering Controls: Use general ventilation to minimize exposure to vapor or mist.
Work Practices: Avoid eye and skin contact and inhalation of vapor or mist. Avoid contact with food. Not for personal cleansing.

KEEP OUT OF THE REACH OF CHILDREN

V Transportation and Regulatory Data

U.S. DOT, IATA, IMG Hazard Class: Not restricted.

U.S. DOT Proper Shipping Name: None

EPA- SARA Title III/CERCLA: Product may be regulated under Sections 311/312. This product contains no chemicals regulated under Section 304/CERCLA or Section 313.

TSCA/DSL: All chemicals in this product are listed on the TSCA Inventory. The DSL status for some components has not been determined.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed down material.

Waste Disposal: Disposal must be made in accordance with applicable federal, state and local regulations.

VII Reactivity Data

Stability: Mixing with sodium hypochlorite may release small amounts of formaldehyde gas.

Storage/Disposal: Do not use or store near heat or open flame.

VIII Fire and Explosion Data

Flashpoint: >119°F Method: Closed cup.
Unusual Fire and Explosion Hazards: None

IX Physical Data

Flashpoint..... >119°F
Specific Gravity ..... 0.99 g/cc.
pH.....5.0-6.0
Solubility in Water .....Liquid is completely dispersible

©1963, 1991 THE CLOROX COMPANY
DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH DATE PREPARED 6/07

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

HMIS®

HEALTH	**1**	**REACTIVITY**	**0**
FLAMMABILITY	**0**	**PERSONAL PROTECTION**	**A**

Identity (As Used on Label and List)
33632, 33601, 33605, 33694, 33635, 33655
Liquid Alive Odor Digester

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION I

Manufacturer's Name
ITW Dymon

Address (Number, Street, City, State, and ZIP Code)
805 East Old 56 Highway

Olathe, Kansas 66061

Emergency Telephone Number
1-800-535-5053

Telephone Number for Information
1-913-397-9889

Date Prepared
May 27, 2005

Signature of Preparer (Optional)
Regulatory Dept.

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	% (Opt.)
Sodium dodecylbenzenesulfonate	25155-30-0	None	None		0.5-1.5%

None of the compounds in this product are listed or present in concentrations requiring reporting under SARA Title III Sec. 313 Refer to 40 CFR 372.

TSCA: All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

Any substance listed as hazardous by the States of California, Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania or Texas is described above if known present in regulated concentrations.

SECTION III Physical/Chemical Characteristics

Boiling Point	212° F	**Specific Gravity (H_2O = 1)** @70° F	1.01
Vapor Pressure (mm Hg @ 70° F)	No Data	**Melting Point**	No Data
Vapor Density (AIR = 1)	Greater than one (1)	**Evaporation Rate (Butyl Acetate = 1)**	No Data
Solubility in Water	Complete	**pH**	7.5 ± 0.5

Appearance and Odor-- White opaque liquid with a characteristic natural fresh scent.

VOC's--This product contains 5.0 grams per liter or 0.5% by weight VOC's.

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
None to boiling point. (PMCC)	No Data	No Data	No Data

Extinguishing Media
Not usually necessary as this product does not readily support combustion. Use extinguishing agent appropriate for fire's fuel source.

Special Fire Fighting Procedures
Keep containers cool and vapors down with water spray. Prevent runoff from entering sewers and public waterways. Wear SCBA in chemical fires.

Unusual Fire and Explosion Hazards
None known.

SECTION V - Reactivity Data

Stability	**Unstable**		**Conditions to Avoid** - Freezing temperatures.
	Stable	X	

Incompatibility (Materials to Avoid)
Strong acids and alkalies, strong oxidizing and reducing agents.

Hazardous Decomposition or Byproducts
Carbon dioxide, carbon monoxide, soot, smoke, sulfur dioxide, and hydrogen sulfide.

Hazardous	**May Occur**		**Conditions to Avoid** - None known
Polymerization	**Will Not Occur**	X	

SECTION VI - Health Hazard Data

Route(s) of Entry	**Eyes?**	**Inhalation?**	**Skin?**	**Ingestion?**
	Yes	No	No	No

Health Hazards (Acute and Chronic)
Caution: May cause eye irritation. Repeated or prolonged skin contact may cause drying or dermatitis. Avoid all contact with open wounds. Ingestion will lead to nausea or diarrhea. Follow good chemical hygiene practices.

Carcinogenicity:	**NTP?**	**IARC Monographs?**	**OSHA Regulated?**
None known.	No	No	No

Prop 65 Warning: This product may contain trace chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Signs and Symptoms of Exposure
Redness, tearing, burning in eyes. Nausea, vomiting, diarrhea if ingested. Skin overexposures may bring about drying or cracking of skin.

Medical Conditions Generally Aggravated by Exposure
Pre-existing skin disorders may be aggravated if the product is not properly used.

Emergency and First Aid Procedures
Eyes - Flush with plenty of water for at least 15 minutes lifting eyelids to insure complete removal. See a physician immediately. **Ingestion** - Do not induce vomiting unless directed by a physician. Drink plenty of water, then call a physician or poison control center. **Inhalation** - Get to fresh air. If breathing has stopped, qualified personnel should administer artificial respiration. **Skin** - Wash thoroughly with soap and water.

SECTION VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled
Caution, slip hazard. Dike to prevent spread. Vacuum up for reuse. Wash residuals with water.

Waste Disposal Method -
Consult local, state, and federal regulations. Triple rinse empty container then offer for recycling, reuse, or reconditioning.

Precautions to be Taken in Handling and Storing
Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Store out of direct sunlight. Do not swallow.

Other Precautions - Follow label directions carefully. Keep out of reach of children. Keep container tightly sealed when not in use. Do not contaminate water, food, or feed by use or storage.

SECTION VIII - Control Measures

Respiratory Protection (Specify Type)
Not usually necessary. Use with adequate ventilation. Use NIOSH/MSHA approved respirator if PELs or TLVs are exceeded.

Ventilation	**Local Exhaust**	Not necessary	**Special**	None
	Mechanical (General)	Yes	**Other**	None

Protective Gloves
Only if direct contact possible.

Eye Protection
Yes, approved safety glasses or goggles (ANSI)

Other Protective Clothing or Equipment
Only if direct contact possible (i.e. - apron, boots, etc.)

Work/Hygienic Practices
Normal. Wash hands after use and before eating, drinking, smoking, using restrooms, etc.

WARNING! The use of this product is beyond the control of the manufacturer, therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.
The manufacturer warrants only that this product meets the manufacturer's specifications for such product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER, OF THIS PRODUCT. THE MANUFACTURER SHALL BE IN NO WAY RESPONSIBLE FOR THE IMPROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the manufacturer for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

Revision Number: 003.0

Issue date: 05/19/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **Loctite Power Grab Ultimate Construction Adhesive**

IDH number: 1989550

Product type: Adhesive

Restriction of Use: None identified

Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: +1 (800) 624-7767
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE.

CAUSES SKIN IRRITATION.
CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A

PICTOGRAM(S)

Precautionary Statements

Prevention:
Wash thoroughly after handling. Wear eye and face protection. Wear protective gloves.

Response:
IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage: Not prescribed

Disposal: Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	60 - 100
Phthalate ester	Proprietary	10 - 30
Silane derivative	Proprietary	1 - 5
Fatty acid	Proprietary	1 - 5
Quartz (SiO2) respirable particulates (RCS) >=10%	14808-60-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

Exposure to moisture during cure will release 1-2% methanol.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash with soap and water. If skin irritation persists, call a physician. Wipe off paste with paper towel or cloth.

Eye contact: Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. If symptoms develop and persist, get medical attention.

Ingestion: Do not induce vomiting. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: carbon dioxide, foam, powder, water spray jet, fine water spray

Special firefighting procedures: Wear protective equipment. Wear self-contained breathing apparatus.

Unusual fire or explosion hazards: None identified.

Hazardous combustion products: Carbon dioxide Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Store in a partly filled, closed container until disposal. Spilled material will solidify. Scrape up as much material as possible. Maintain good ventilation for large spills.

7. HANDLING AND STORAGE

Handling: Do not wear contact lenses. Avoid contact with eyes, skin and clothing. Keep out of the reach of children. Protect from moisture. Use only with adequate ventilation.

Storage: For safe storage, store between 20 °C (68°F) and 45 °C (113°F)
Store in a cool, dry area. Avoid moisture.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m3 TWA Total dust.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Phthalate ester	None	None	None	None
Silane derivative	None	None	None	None
Fatty acid	10 mg/m3 TWA	None	None	None
Quartz (SiO2) respirable particulates (RCS) >=10%	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Paste, Solid
Color: White to tan
Odor: alcohol-like
Odor threshold: Not available.
pH: Not available.
Vapor pressure: Not available.
Boiling point/range: Not available.
Melting point/ range: Not available.
Specific gravity: 1.42 at 20 °C (68°F)
Vapor density: Heavier than air.
Flash point: 107 °C (224.6 °F) Seta closed cup
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Evaporation rate: Not available.
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not available.
VOC content: 2.73 %; 48.13 g/l (by weight, calculated using CARB method; g/L less water, less exempts calculated using SCAQMD method)
Viscosity: 1,800,000 - 2,200,000 mPa.s
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.

Hazardous decomposition products: Methanol is liberated slowly upon exposure to moisture.

Incompatible materials: Oxidizing agents.

Reactivity: Not available.

Conditions to avoid: Exposure to moisture.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Inhalation, Skin contact, Eye contact

Potential Health Effects/Symptoms

Inhalation: May be harmful if inhaled. Methanol is released during application and cure, which may affect the nervous system causing dizziness, headache or nausea.
Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.
Eye contact: Vapors may irritate eyes. Contact with eyes will cause irritation.
Ingestion: Harmful if swallowed. Not expected under normal conditions of use.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Phthalate ester	None	Irritant
Silane derivative	None	Irritant, Allergen
Fatty acid	Oral LD50 (RAT) = 4.6 g/kg	Irritant
Quartz (SiO2) respirable particulates (RCS) >=10%	None	No Data

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Phthalate ester	No	No	No
Silane derivative	No	No	No
Fatty acid	No	No	No
Quartz (SiO2) respirable particulates (RCS) >=10%	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

International Air Transportation (ICAO/IATA)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Delayed Health, Immediate Health
CERCLA/SARA Section 313: None above reporting de minimis

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: This Safety Data Sheet contains changes from the previous version in Section(s):
15

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 05/19/2015

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

RECKITT BENCKISER

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	**PROFESSIONAL LYSOL® BRAND II DISINFECTANT SPRAY, ALL SCENTS (AEROSOL)**
Product Description	A professional disinfectant spray that kills viruses, bacteria, mold and mildew.
Manufacturer	Reckitt Benckiser North America, Inc. Morris Corporate Center IV 399 Interpace Parkway (P.O. Box 225) Parsippany, N.J. 07054-0225
Product Identifier	EPA Reg. No. 777-72
Item Number	36241-76510-00

MSDS#	Not available.
Validation Date	**9/8/2005**
Print Date	9/8/2005

In case of Emergency:	Telephone: 800-677-9218 (Professional Products)
Transportation Emergencies:	Chemtrec: 1-800-424-9300 (U.S. & Canada) Outside the U.S & Canada (North America), call: 703-527-3887

Formula Number	677-059A (F/F 373288) Original; 677-059B (F/F 373286) Fresh; 775-111 (F/F 380206) Country®; 677-092B (F/F 377643) Crisp Linen®; 677-059G (F/F 373280) Spring Waterfall™; 629-183C (F/F 372171) Summer Breeze TM; 674-015D (F/F 379616) Green Apple.
UPC Number	Original 36241-76510; Fresh 36241-76508; Country® 36241-76507; Crisp Linen® 36241-76511; Spring Waterfall™ 36241-76509; Summer Breeze™ 36241-74520; Green Apple 36241-76768. All 19 oz. Aerosol containers.

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
1) CARBON DIOXIDE	124-38-9	4.0	TWA: 9000 (mg/m^3) from ACGIH (TLV) TWA: 5000 (ppm) from ACGIH (TLV) TWA: 9000 STEL: 54 (mg/m^3) from OSHA TWA: 5000 (ppm) from OSHA
2) ETHANOL	64-17-5	81.0	TWA: 1880 (mg/m^3) from ACGIH (TLV) TWA: 1000 (ppm) from ACGIH (TLV) TWA: 1900 (mg/m^3) from OSHA TWA: 1000 (ppm) from OSHA

Section 3. Hazards Identification

Emergency Overview

WARNING: Flammable. Contents under pressure. Causes eye irritation. Do not spray in eyes, on skin or on clothing.

Keep away from heat, sparks and open flame. Exposure to temperatures above 130° F may cause bursting. Do not puncture or incinerate.

KEEP OUT OF REACH OF CHILDREN.

Section 4. First Aid Measures

Eye Contact	Immediately flush eyes thoroughly with water, remove any contact lenses, and continue to flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.
Skin Contact	If on skin, wash with plenty of soap and water. If irritation occurs or persists, get medical attention.
Inhalation	If required, remove to fresh air.
Ingestion	Rinse mouth and drink a glass of water. If symptoms persist, consult a physician. NEVER give an unconscious person anything to ingest.

Continued on Next Page

Section 5. Fire and Explosion Data

Flammability	Flammable. See Section 14 for any Shipping Classifications.
Flash Point	Not applicable. Aerosol flame extension greater than 18 inches or 45 cm.
Explosive Limits in Air	LOWER: 3.3% UPPER: 19%
Products of Combustion	Not available.
Fire and Explosion Hazards	CONTENTS UNDER PRESSURE. Do not use or store near hear or open flame. Do not puncture or incinerate. Exposure to temperatures above 130° F (55° C) may cause bursting.
Fire Fighting Media and Instructions	Water spray, foam, dry chemical or carbon dioxide. Use media suitable for surrounding fire. Use water spray to cool fire exposed containers.
Special Fire Fighting Instructions	Wear self-contained breathing apparatus and protective equipment appropriate for fighting a typical chemical fire. Move containers away from fire if possible and safe to do so. Provide shielding for venting, rupturing or bursting containers.

Section 6. Accidental Release Measures

Accidental Spill	Small spills: Soak up any spilled liquid with an inert absorbent material and dispose of in an appropriate waste container. Rinse surface reside and flush to sink or sanitary sewer. For large spills due to ruptured containers, eliminate all sources of ignition and ventilate the area with equipment rated for use in flammable environments. Dike, contain and collect liquid and store in metal containers for disposal according to local, state and federal regulations.

Section 7. Handling and Storage

Handling and Storage	WARNING: Flammable. Contents under pressure. Causes eye irritation. Do not spray in eyes, on skin or on clothing. Keep away from heat, sparks and open flame. Do not expose to heat or store at temperatures above 55° C (130° F) as container may burst. Store in original container in cool, dry areas inaccessible to small children. Do not puncture or incinerate container. Do not use on polished wood, painted surfaces, leather, rayon fabrics or acrylic plastics. KEEP OUT OF REACH OF CHILDREN. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	None required under normal use conditions. For occupational situations, use sufficient ventilation to keep hazardous ingredients below their Threshold Limit Values (see Section #2).
Eye Protection	None required under normal use conditions. When handling in large quantities or responding to emergency situations, the use of appropriate eye protection is recommended. Emergency responders should wear full eye and face protection.
Skin Protection	None required under normal use conditions. Emergency responders should wear impermeable gloves.
Respiratory Protection	None required for normal recommended use, avoid prolonged breathing of vapors. A self contained breathing apparatus (SCBA) should be used by emergency responders to avoid inhalation of the vapors which may be generated by this product during spill clean-up or fire situations.
Other Protection	Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
Work/Hygienic Practices	Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

Continued on Next Page

Section 9. Physical and Chemical Properties

Description	Aerosol container.
pH	10 [Basic.]
Boiling/Condensation Point	Not available.
Specific Gravity	0.835 @ 25°C
Vapor Pressure	95 - 105 psig
Vapor Density	>1 (concentrate)*
Viscosity	Not available.
Solubility	Complete.
Physical Chemical Comments	Not available.

Odor	Various scents. See Section 1.
Color	Clear spray mist.

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	Keep away from heat, sparks and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F (55° C) may cause bursting.
Incompatibility with Various Substances	Strong oxidizing agents
Hazardous Decomposition Products	Carbon dioxide, carbon monoxide, and unidentified organic compounds may be formed during thermal decomposition.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Exposure effects

Eye Contact	Causes eye irritation.
Skin Contact	None expected. May cause skin irritation upon prolonged or repeated contact.
Inhalation	None expected.
Ingestion	Ingestion is unlikely through the normal anticipated use of this product. Ingestion of small quantities is not expected to cause any significant adverse effects. Contains denatured ethanol; ingestion may result in ethanol poisoning.
Carcinogenicity	Not listed as carcinogenic by OSHA, NTP or IARC.

Section 12. Ecological Information

Ecotoxicity	Not available.

Continued on Next Page

Section 13. Disposal Considerations

Waste Disposal	Dispose of in accordance with local, state and federal regulations. Container disposal: Replace cap and discard in trash. Do not puncture or incinerate. Do not reuse empty container.

Section 14. Transport Information

DOT Classification	ORM-D
Proper Shipping Name	Consumer Commodity.
DOT Identification Number	Not applicable
Packing Group	Not applicable
Maritime Transportation	Not applicable.
Hazardous Substances Reportable Quantity	Not applicable.
Special Provisions for Transport	ORM-D: For US Domestic Shipments Only.
TDG Classification	Consumer Commodity - Transborder Consignment.
ADR Classification	Not applicable.
IMDG Classification	UN1950, Aerosols, class 2, Limited Quantity.
IATA Classification	UN1950, Aerosols, Flammable, Class/Div. 2.1, Limited Quantity.

Section 15. Regulatory Information

Federal and State Regulations	SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting: None California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act: None
Other Classifications	**WHMIS (Canada)** CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
New Jersey Right-To-Know Regulation:	NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW ACT: This EPA Registered Product is exempt from the labeling requirements of the above act. N.J.A.C. 8:59-5.5 #1.

Section 16. Other Information

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	2
Reactivity	0
Personal Protection	B

National Fire Protection Association (U.S.A.)

NFPA Aerosol Level	1, per NFPA 30B 1.7.1

Continued on Next Page

Validated by Product Safety on 9/8/2005.	Printed 9/8/2005.

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

RECKITT BENCKISER

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	**PROFESSIONAL LYSOL® BRAND II DISINFECTANT SPRAY, ALL SCENTS (AEROSOL)**
Product Description	A professional disinfectant spray that kills viruses, bacteria, mold and mildew.
Manufacturer	Reckitt Benckiser North America, Inc. Morris Corporate Center IV 399 Interpace Parkway (P.O. Box 225) Parsippany, N.J. 07054-0225
Product Identifier	EPA Reg. No. 777-72
Item Number	36241-76510-00

MSDS#	Not available.
Validation Date	**9/8/2005**
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In case of Emergency:	Telephone: 800-677-9218 (Professional Products)
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Formula Number	677-059A (F/F 373288) Original; 677-059B (F/F 373286) Fresh; 775-111 (F/F 380206) Country®; 677-092B (F/F 377643) Crisp Linen®; 677-059G (F/F 373280) Spring Waterfall™; 629-183C (F/F 372171) Summer Breeze TM; 674-015D (F/F 379616) Green Apple.
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Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
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Keep away from heat, sparks and open flame. Exposure to temperatures above 130° F may cause bursting. Do not puncture or incinerate.

KEEP OUT OF REACH OF CHILDREN.

Section 4. First Aid Measures

Eye Contact	Immediately flush eyes thoroughly with water, remove any contact lenses, and continue to flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.
Skin Contact	If on skin, wash with plenty of soap and water. If irritation occurs or persists, get medical attention.
Inhalation	If required, remove to fresh air.
Ingestion	Rinse mouth and drink a glass of water. If symptoms persist, consult a physician. NEVER give an unconscious person anything to ingest.

Continued on Next Page

Section 5. Fire and Explosion Data

Flammability	Flammable. See Section 14 for any Shipping Classifications.
Flash Point	Not applicable. Aerosol flame extension greater than 18 inches or 45 cm.
Explosive Limits in Air	LOWER: 3.3% UPPER: 19%
Products of Combustion	Not available.
Fire and Explosion Hazards	CONTENTS UNDER PRESSURE. Do not use or store near hear or open flame. Do not puncture or incinerate. Exposure to temperatures above 130° F (55° C) may cause bursting.
Fire Fighting Media and Instructions	Water spray, foam, dry chemical or carbon dioxide. Use media suitable for surrounding fire. Use water spray to cool fire exposed containers.
Special Fire Fighting Instructions	Wear self-contained breathing apparatus and protective equipment appropriate for fighting a typical chemical fire. Move containers away from fire if possible and safe to do so. Provide shielding for venting, rupturing or bursting containers.

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Handling and Storage	WARNING: Flammable. Contents under pressure. Causes eye irritation. Do not spray in eyes, on skin or on clothing. Keep away from heat, sparks and open flame. Do not expose to heat or store at temperatures above 55° C (130° F) as container may burst. Store in original container in cool, dry areas inaccessible to small children. Do not puncture or incinerate container. Do not use on polished wood, painted surfaces, leather, rayon fabrics or acrylic plastics. KEEP OUT OF REACH OF CHILDREN. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	None required under normal use conditions. For occupational situations, use sufficient ventilation to keep hazardous ingredients below their Threshold Limit Values (see Section #2).
Eye Protection	None required under normal use conditions. When handling in large quantities or responding to emergency situations, the use of appropriate eye protection is recommended. Emergency responders should wear full eye and face protection.
Skin Protection	None required under normal use conditions. Emergency responders should wear impermeable gloves.
Respiratory Protection	None required for normal recommended use, avoid prolonged breathing of vapors. A self contained breathing apparatus (SCBA) should be used by emergency responders to avoid inhalation of the vapors which may be generated by this product during spill clean-up or fire situations.
Other Protection	Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
Work/Hygienic Practices	Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

Continued on Next Page

Section 9. Physical and Chemical Properties

Description	Aerosol container.
pH	10 [Basic.]
Boiling/Condensation Point	Not available.
Specific Gravity	0.835 @ 25°C
Vapor Pressure	95 - 105 psig
Vapor Density	>1 (concentrate)*
Viscosity	Not available.
Solubility	Complete.
Physical Chemical Comments	Not available.

Odor	Various scents. See Section 1.
Color	Clear spray mist.

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	Keep away from heat, sparks and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F (55° C) may cause bursting.
Incompatibility with Various Substances	Strong oxidizing agents
Hazardous Decomposition Products	Carbon dioxide, carbon monoxide, and unidentified organic compounds may be formed during thermal decomposition.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Exposure effects

Eye Contact	Causes eye irritation.
Skin Contact	None expected. May cause skin irritation upon prolonged or repeated contact.
Inhalation	None expected.
Ingestion	Ingestion is unlikely through the normal anticipated use of this product. Ingestion of small quantities is not expected to cause any significant adverse effects. Contains denatured ethanol; ingestion may result in ethanol poisoning.
Carcinogenicity	Not listed as carcinogenic by OSHA, NTP or IARC.

Section 12. Ecological Information

Ecotoxicity	Not available.

Continued on Next Page

Section 13. Disposal Considerations

Waste Disposal	Dispose of in accordance with local, state and federal regulations. Container disposal: Replace cap and discard in trash. Do not puncture or incinerate. Do not reuse empty container.

Section 14. Transport Information

DOT Classification	ORM-D
Proper Shipping Name	Consumer Commodity.
DOT Identification Number	Not applicable
Packing Group	Not applicable
Maritime Transportation	Not applicable.
Hazardous Substances Reportable Quantity	Not applicable.
Special Provisions for Transport	ORM-D: For US Domestic Shipments Only.
TDG Classification	Consumer Commodity - Transborder Consignment.
ADR Classification	Not applicable.
IMDG Classification	UN1950, Aerosols, class 2, Limited Quantity.
IATA Classification	UN1950, Aerosols, Flammable, Class/Div. 2.1, Limited Quantity.

Section 15. Regulatory Information

Federal and State Regulations	SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting: None California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act: None
Other Classifications	**WHMIS (Canada)** CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
New Jersey Right-To-Know Regulation:	NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW ACT: This EPA Registered Product is exempt from the labeling requirements of the above act. N.J.A.C. 8:59-5.5 #1.

Section 16. Other Information

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	2
Reactivity	0
Personal Protection	B

National Fire Protection Association (U.S.A.)

NFPA Aerosol Level	1, per NFPA 30B 1.7.1

Continued on Next Page

Validated by Product Safety on 9/8/2005.	Printed 9/8/2005.

Notice to Reader

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RECKITT BENCKISER

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	**LYSOL® BRAND SANITIZING WIPES, ALL SCENTS**
Product Description	Pre-moistened, non-woven sanitizing towelette wipes available in various scents.
Manufacturer	Reckitt Benckiser North America, Inc. Morris Corporate Center IV 399 Interpace Parkway (P.O. Box 225) Parsippany, N.J. 07054-0225
Product Identifier	E.P. A. Registration No. 777-68
Item Number	374054

MSDS#	Not available
Validation Date	**3/30/2004**
Print Date	3/30/2004

In case of Emergency:	Telephone: 800-228-4722
Transportation Emergencies:	Chemtrec: 1-800-424-9300 (U.S. & Canada) Outside the U.S & Canada (North America), call: 703-527-3887

Formula Number	772-063 (F/F 374054) Spring Waterfall; 772-064 (F/F 374046) Citrus; 869-025 (F/F 382139) Citrus Scent (70 count only).
UPC Number	19200-75500 (35 towelettes, 7.5" x 8") & 19200-76983 (3 pack of 35 towelettes each) Citrus Scent; 19200-75501 (35 towelettes, 7.5" x 8") Spring Waterfall; 19200-77182 (70 towelettes, 7.5" x 8") Citrus Scent using F/F 382139.

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
1) ETHANOL	64-17-5	8-10	TWA: 1880 (mg/m^3) from ACGIH (TLV) [United States] TWA: 1000 (ppm) from ACGIH (TLV) [United States] TWA: 1900 (mg/m^3) from OSHA (PEL) [United States] TWA: 1000 (ppm) from OSHA (PEL) [United States]
2) N-ALKLYL (C14,C12,C16) DIMETHYL BENZYL AMMONIUM CHLORIDE (80% ACTIVE)	139-08-2	0-1	Not Available

Section 3. Hazards Identification

Emergency Overview	CAUTION: May cause eye irritation. Avoid contact with eyes. Wash hands after use. KEEP OUT OF REACH OF CHILDREN.

Section 4. First Aid Measures

Eye Contact	In case of eye contact, immediately rinse eyes thoroughly with plenty of water. Remove any contact lenses and continue rinsing for at least 15 minutes. If irritation persists, consult a physician.
Skin Contact	In keeping with good hygienic practices, wash exposed areas thoroughly with soap and water.
Inhalation	None required under recommended use conditions. Remove to fresh air.
Ingestion	Rinse mouth with water. Contact a physician or poison control center if symptoms develop. NEVER give an unconscious person anything to ingest.

Continued on Next Page

Section 5. Fire and Explosion Data

Flammability	See Section 14 for any Shipping Classifications.
Flash Point	Not applicable for finished product. CLOSED CUP: 38.33°C (101°F) (Tagliabue) for liquid phase only.
Explosive Limits in Air	Not available.
Products of Combustion	Not available.
Fire and Explosion Hazards	None known.
Fire Fighting Media and Instructions	Use water spray, dry chemical, foam or carbon dioxide, as suitable for the surrounding fire.
Special Fire Fighting Instructions	Wear self-contained breathing apparatus and protective clothing appropriate for fighting a typical chemical fire.

Section 6. Accidental Release Measures

Accidental Spill	Pick up spilled towelettes and place in dry trash. Absorb spilled liquid from container with paper towel or an inert material and placed in an appropriate waste disposal container. Discard empty canister in trash or rinse and recycle as appropriate.

Section 7. Handling and Storage

Handling and Storage	CAUTION: May cause eye irritation. Avoid contact with eyes. Wash hands after use. NOT INTENDED FOR PERSONAL HYGIENE. DO NOT PUSH FINGER THROUGH OPENING. Read container directions carefully. Store unopened package in a cool, dry secure area inaccessible to children. Do not re-use empty container. KEEP OUT OF REACH OF CHILDREN. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	None required.
Eye Protection	Avoid contact with eyes. Emergency responders should wear full eye and face protection.
Skin Protection	Wash hands after use.
Respiratory Protection	None required.
Other Protection	None required.
Work/Hygienic Practices	Washing with soap and water after use is recommended as good hygienic practice to prevent possible skin irritation and/or eye irritation from hand contact.

Section 9. Physical and Chemical Properties

Description	Liquid on towelettes. (Clear, water thin liquid on completely wetted fabric towelettes).
pH	5.0 - 8.5 (Liquid)
Boiling/Condensation Point	Not available.
Specific Gravity	0.97 (Liquid phase)

Odor	Citrus Scent - Citrus / grapefruit. Spring Waterfall - Fruity / floral scent. (Slight.)
Color	Colorless, clear, watery liquid on whit pre-moistened towelettes.

Continued on Next Page

Vapor Pressure	Not available.
Vapor Density	Not determined.
Viscosity	Not available.
Solubility	Complete (liquid phase).
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	None known.
Incompatibility with Various Substances	None known.
Hazardous Decomposition Products	None known.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Exposure effects

Eye Contact	May irritate the eyes.
Skin Contact	Non-irritating.
Inhalation	None expected.
Ingestion	Not orally toxic.
Carcinogenicity	Not listed as carcinogenic by OSHA, NTP or IARC.

Section 12. Ecological Information

Ecotoxicity	Not available.

Section 13. Disposal Considerations

Waste Disposal	Empty canister and used towelettes may be included with domestic refuse for disposal in landfill. Recycle empty container if appropriate in your area. Large spills of liquid from multiple ruptured or damaged containers: Contain and collect liquid for evaluation and disposal according to local, state and federal regulations.

Section 14. Transport Information

DOT Classification	Not regulated by DOT (United States).
Proper Shipping Name	Not applicable.
DOT Identification Number	Not applicable.
Packing Group	Not applicable.

Continued on Next Page

Maritime Transportation	Not applicable.
Hazardous Substances Reportable Quantity	Not applicable.
Special Provisions for Transport	Not applicable. NOTE: Non-hazardous determination based upon DOT Special Provision 47, IMDG Special Provision 216 & IATA Special Provision 46.
TDG Classification	Not regulated by TDG.
ADR Classification	Not applicable.
IMDG Classification	Not regulated by IMDG.
IATA Classification	Not regulated by IATA.

Section 15. Regulatory Information

Federal and State Regulations

SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting:

None

California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act:

None

Other Classifications

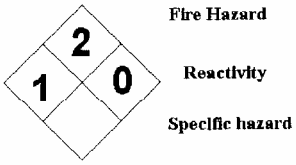
WHMIS (Canada) Not a WHMIS controlled product.

Section 16. Other Information

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	2
Reactivity	0
Personal Protection	B

National Fire Protection Association (U.S.A.)



NFPA Aerosol Level Not applicable.

Validated by Product Safety on 3/30/2004.

Printed 3/30/2004.

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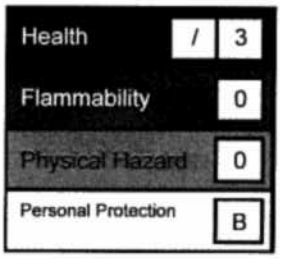
RECKITT BENCKISER

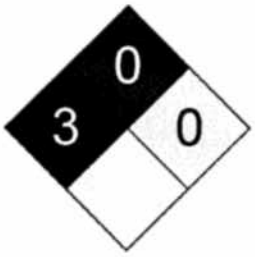
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	**LYSOL® Brand (Kills 99.9% of Viruses & Bacteria) Mold & Mildew Remover Complete Clean with Bleach**
UPC CODES	Refer to Section 16
CAS #	Mixture
Product use	Cleaner
Distributed by	Reckitt Benckiser Morris Corporate Center IV 399 Interpace Parkway P.O. Box 225 Parsippany, NJ 07054-0225 In Case of Emergency: 1-800-228-4722 Transportation Emergencies: 24 Hour Number: North America: CHEMTREC: 1-800-424-9300 Outside North America: 1-703-527-3887

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0





2. Hazards Identification

Emergency overview

This product is regulated by the US EPA as a disinfectant.

PRECAUTIONARY STATEMENTS: Hazards to humans and domestic animals.

WARNING
Causes eye and skin irritation. Do not get in eyes, on skin or on clothing. Vapors may irritate. Use only in well-ventilated areas. Avoid prolonged breathing of vapors. Not recommended for use by persons with heart conditions or chronic respiratory problems such as asthma, emphysema or obstructive lung disease. HARMFUL IF SWALLOWED. For sensitive skin or prolonged use, wear rubber gloves.

PHYSICAL AND CHEMICAL HAZARDS: This Product Contains Bleach. Do not mix with other household chemicals such as products containing ammonia, toilet bowl cleaners or acid cleaners as hazardous gases may be released.

KEEP OUT OF REACH OF CHILDREN.

Potential short term health effects

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	Causes eye irritation. Do not get into eyes.
Skin	Causes skin irritation. Do not get on skin or clothing.
Inhalation	Odors may irritate. Avoid prolonged breathing of vapor.
Ingestion	Harmful if swallowed.
Target organs	Eyes. Respiratory system. Skin.
Chronic effects	The finished product is not expected to have chronic health effects.
Signs and symptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Sodium hypochlorite	7681-52-9	1 - 5
Sodium hydroxide	1310-73-2	0 - 1

4. First Aid Measures

First aid procedures

Eye contact — Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact — If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

Inhalation — Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Ingestion — Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Notes to physician — Symptoms may be delayed.

General advice — If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties — Not flammable by OSHA criteria.

Extinguishing media

Suitable extinguishing media — Water spray. Foam. Dry chemical. Carbon dioxide.

Unsuitable extinguishing media — Not available

Protection of firefighters

Specific hazards arising from the chemical — Not available

Protective equipment for firefighters — Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products — May include and are not limited to: Oxygen. Chlorine gas.

Explosion data

Sensitivity to mechanical impact — Not available

Sensitivity to static discharge — Not available

6. Accidental Release Measures

Personal precautions — Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Methods for containment — Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up — Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	WARNING. Causes eye and skin irritation. Do not get this material in your eyes, on your skin, or on your clothing. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Use good industrial hygiene practices in handling this material. When using do not eat or drink. Not recommended for use by persons with heart conditions or chronic respiratory problems such as asthma, emphysema or obstructive lung disease.
Storage	Store in original container in a cool, secure area inaccessible to children and pets. Do not reuse container. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Sodium hydroxide	**ACGIH-TLV** Ceiling: 2 mg/m3 **OSHA-PEL** TWA: 2 mg/m3
Sodium hypochlorite	**ACGIH-TLV** Not established **OSHA-PEL** Not established

Engineering controls	Use only under good ventilation conditions or with respiratory protection.
Personal protective equipment	
Eye / face protection	Avoid contact with eyes. Wear safety glasses with side shields. Emergency responders should wear full eye and face protection.
Hand protection	Avoid contact with the skin. For sensitive skin or prolonged use, wear rubber gloves. Emergency responders should wear impermeable gloves.
Skin and body protection	As required by employer code. Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Emergency responders should wear self-contained breathing apparatus (SCBA) to avoid inhalation of vapours generated by this product during a spill or other clean-up operations.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

9. Physical and Chemical Properties

Appearance	Clear.
Color	Light Straw
Form	aqueous solution
Odor	slight chlorine
Odor threshold	Not available
Physical state	Liquid
pH	12.5 (Basic)
Freezing point	Not available
Pour point	Not available
Boiling point	Not available

Flash point	> 199.94 °F (> 93.3 °C) Tagliabue
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.044 (Water = 1)
Octanol/water coefficient	Not available
Solubility (H2O)	Complete
Auto-ignition temperature	Not available

10. Stability and Reactivity

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	DO NOT MIX WITH BLEACH or use in conjunction with other household products.
Incompatible materials	Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Chlorine gas. Oxygen.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	**LC50**
Sodium hydroxide	Not available
Sodium hypochlorite	> 5250 mg/m3 rat

Component analysis - Oral LD50

Ingredient(s)	**LD50**
Sodium hydroxide	Not available
Sodium hypochlorite	8200 mg/kg rat; 5800 mg/kg mouse

Effects of acute exposure

Eye	Causes eye irritation. Do not get into eyes.
Skin	Causes skin irritation. Do not get on skin or clothing.
Inhalation	Odors may irritate. Avoid prolonged breathing of vapor.
Ingestion	Harmful if swallowed.
Sensitization	The finished product is not expected to have chronic health effects.
Chronic effects	The finished product is not expected to have chronic health effects.
Carcinogenicity	The finished product is not expected to have chronic health effects.

IARC - Group 3 (Not Classifiable)

Sodium hypochlorite	7681-52-9	Monograph 52 [1991] (listed under Hypochlorite salts)

Mutagenicity	The finished product is not expected to have chronic health effects.
Reproductive effects	The finished product is not expected to have chronic health effects.
Teratogenicity	The finished product is not expected to have chronic health effects.
Synergistic Materials	Not available

12. Ecological Information

Ecotoxicity Bulk quantities, if spilled, may be toxic to aquatic organisms, fish, birds and mammals. Control and clean up all exterior spills and prevent liquid from entering any streams, rivers, lakes and all other bodies of water.

Ecotoxicity - Freshwater Algae Data

Sodium hypochlorite	7681-52-9	24 Hr EC50 Skeletonema costatum: 0.095 mg/L

Ecotoxicity - Freshwater Fish Species Data

Sodium hydroxide	1310-73-2	96 Hr LC50 Oncorhynchus mykiss: 45.4 mg/L [static]
Sodium hypochlorite	7681-52-9	96 Hr LC50 Pimephales promelas: 0.06-0.11 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 4.5-7.6 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 0.4-0.8 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 0.28-1 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 0.05-0.771 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: >0.03-<0.19 mg/L [semi-static]; 96 Hr LC50 Oncorhynchus mykiss: 0.18-0.22 mg/L [static]

Ecotoxicity - Water Flea Data

Sodium hypochlorite	7681-52-9	96 Hr EC50 Daphnia magna: 2.1 mg/L; 48 Hr EC50 Daphnia magna: 0.033 - 0.044 mg/L [Static]

Environmental effects	Not available
Aquatic toxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available
Chemical fate information	Not available

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Dispose in accordance with all applicable regulations. Small amounts of waste: Wipe up with a wet paper towel and discard absorbed material in trash collection. Do not reuse empty container. Rinse container and offer for recycling where facilities exist. Large quantities of waste liquid: Contain and collect for evaluation and disposal according to local, state, provincial and federal regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

UN 3266, Corrosive liquid, basic, inorganic, N.O.S.
(Sodium Hydroxide, Sodium Hypochlorite), Class 8, PGIII,
Limited Quantity. Re-classed as Consumer
Commodity ORM-D

Transportation of Dangerous Goods (TDG - Canada)

UN 3266, Corrosive liquid, basic, inorganic, N.O.S.
(Sodium Hydroxide, Sodium Hypochlorite), Class 8, PGIII,
Limited Quantity. Re-classed as Consumer
Commodity/ LTD. QTY.

IMDG (Marine Transport)

UN 3266, Corrosive liquid, basic, inorganic, N.O.S.
(Sodium Hydroxide, Sodium Hypochlorite), Class 8, PGIII,
Limited Quantity

IATA/ICAO (Air)

UN 3266, Corrosive liquid, basic, inorganic, N.O.S.
(Sodium Hydroxide, Sodium Hypochlorite), Class 8, PG III

15. Regulatory Information

US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Product Registration: Registered with EPA, EPA Reg. No. 777-83

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Sodium hydroxide	1310-73-2	1000 Lb final RQ; 454 kg final RQ
Sodium hypochlorite	7681-52-9	100 Lb final RQ; 45.4 kg final RQ

U.S. - CWA (Clean Water Act) - Hazardous Substances

Sodium hydroxide	1310-73-2	Present
Sodium hypochlorite	7681-52-9	Present

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Sodium hypochlorite: 100.0000
Sodium hydroxide: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - Yes
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
Clean Air Act (CAA)	Not available
Clean Water Act (CWA)	Not available
State regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Sodium hydroxide	1310-73-2	Present
Sodium hypochlorite	7681-52-9	Present

U.S. - Louisiana - Reportable Quantity List for Pollutants

Sodium hydroxide	1310-73-2	1000 Lb final RQ; 454 kg final RQ
Sodium hypochlorite	7681-52-9	100 Lb final RQ; 45.4 kg final RQ

U.S. - Massachusetts - Right To Know List

Sodium hydroxide	1310-73-2	Present
Sodium hypochlorite	7681-52-9	Present

U.S. - Minnesota - Hazardous Substance List

Sodium hydroxide	1310-73-2	Present
Sodium hypochlorite	7681-52-9	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Sodium hydroxide	1310-73-2	sn 1706
Sodium hypochlorite	7681-52-9	sn 1707

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Sodium hydroxide	1310-73-2	1000 Lb RQ (air); 100 lb RQ (land/water)
Sodium hypochlorite	7681-52-9	100 Lb RQ (air); 100 lb RQ (land/water)

U.S. - Pennsylvania - RTK (Right to Know) List

Sodium hydroxide	1310-73-2	Environmental hazard
Sodium hypochlorite	7681-52-9	Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Sodium hydroxide	1310-73-2	Toxic; Flammable

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer	This product should only be used as directed on the label and for the purpose intended. To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.
Further information	19200-78915-8 - LYSOL® Brand (Kills 99.9% of Viruses & Bacteria) Mold & Mildew Remover Complete Clean with Bleach - 32 oz. - 0003419
Issue date	09-Jul-2010
Effective date	15-Jun-2010
Prepared by	Reckitt Benckiser Regulatory Department 800-333-3899
Other information	For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

MATERIAL SAFETY DATA SHEET

1. MANUFACTURER / PRODUCT IDENTIFICATION

Product Identification
Product Name: Magic® Sizing
Product Number: 00502, 00522, 00562, 00601, 00504, 00520, 00530, 00516

Company Identification
Faultless Starch / Bon Ami Co.
1025 W 8th Street
Kansas City, MO 64101
1-816-842-1230 (For product information)
1-800-424-9300 or 1-703-527-3887 (For emergencies)

Reason For Issue...: Update emergency contact
Prepared By.....: Bill Wood
Approved By.....: Bill Wood
Title.....: Technical Director
Approval Date.....: June 30, 2007
Supercedes Date....: May 5, 2006
MSDS Number.....: 00502
RTN Number.....: 00000502 (Official Copy)

NFPA Rating:
Health - 1, Flammability - 0, Reactivity - 1

2. HAZARDOUS INGREDIENTS

Chemical Name	Amount	CAS Number
BUTANE	Confidential	106-97-8
PROPANE	Confidential	74-98-6
ISOBUTANE	Confidential	75-28-5

EXPOSURE GUIDELINES:

BUTANE
OSHA PEL: 800 ppm

PROPANE
OSHA PEL: 1000 ppm

3. PHYSICAL / CHEMICAL CHARACTERISTICS

FORM .....: Aerosol
COLOR .....: Clear
ODOR .....: Pleasant
BOILING POINT .....: 212 F
VAPOR DENSITY .....: N/A (Air = 1)
SOLUBILITY IN WATER ...: 95% - 96%
SPECIFIC GRAVITY .....: 1.005 g/ml (Water = 1)
PH .....: ~9.8

4. FIRE AND EXPLOSION HAZARD DATA

FLAMMABLE PROPERTIES
COC Flash Point: N/A
Autoignition Temperature: N/A

FLAMMABLE LIMITS IN AIR
LEL: N/A
UEL: N/A

EXTINGUISHING MEDIA:
Water, carbon dioxide, foam or dry powder.

SPECIAL FIRE FIGHTING PROCEDURES:
Use procedures recommended when aerosols are present.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
As with all aerosols, fire or excessive heat can cause containers to rupture.

5. REACTIVITY DATA

STABILITY:
Stable.

CONDITIONS TO AVOID:
Exposure to heat.

INCOMPATIBILITY (MATERIALS TO AVOID):
Oxygen and strong oxidizing materials.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
If incinerated, carbon dioxide and carbon monoxide will be generated.

HAZARDOUS POLYMERIZATION:
Will not occur.

6. HEALTH HAZARD DATA

INHALATION RISKS AND SYMPTOMS OF EXPOSURE:
No hazard in normal industrial use.

SKIN / EYE CONTACT RISKS AND SYMPTOMS OF EXPOSURE:
Not a skin or eye irritant.

SKIN ABSORPTION RISKS AND SYMPTOMS OF EXPOSURE:
None known.

INGESTION RISKS AND SYMPTOMS OF EXPOSURE:
Not toxic according to Federal Hazardous Substance and Labeling Act.

HEALTH HAZARDS (ACUTE AND CHRONIC):
Not an eye, skin, or respiratory irritant, nor toxic by ingestion according to Federal Hazardous Substances & Labeling Act Regulations. No health hazards known after many years of constant exposure to production employees, laboratory personnel, and consumers.

CARCINOGENICITY INFORMATION:
Not listed by IARC or NTP as a carcinogen.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
None known.

EYE CONTACT FIRST AID:
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes.

INHALATION FIRST AID:
No specific treatment is necessary since this material is not likely to be hazardous by inhalation.

7. PRECAUTIONS FOR SAFE HANDLING AND USE

ACTIONS IF MATERIAL IS RELEASED OR SPILLED:
No special requirements.

WASTE DISPOSAL METHOD:
No special method required. Liquid can be flushed into sewer because no hazardous materials are contained in the liquid phase.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Contents under pressure. Do not expose to heat or store at temperatures above 120 Deg F (as required with all aerosols). Use reasonable care when using.

(section 7 continued)

OTHER PRECAUTIONS:
Avoid spraying into eyes and inhaling spray. Read and follow label CAUTIONS carefully.

8. CONTROL MEASURES

RESPIRATORY PROTECTION:
Not required.

VENTILATION:
All aerosol products should be used with adequate ventilation.

PROTECTIVE GLOVES:
Not required.

EYE PROTECTION:
Recommend approved safety glasses.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
None required.

WORK / HYGIENIC PRACTICES:
Observe resonable care, cleanliness, and caution.

9. TRANSPORTATION INFORMATION

PRODUCT LABEL.....: Magic® Sizing
D.O.T. SHIPPING NAME...: Consumer Commodity
D.O.T. HAZARD CLASS....: ORM-D
UN NUMBER.....: N/A

10. REGULATORY INFORMATION

CHEMICAL INVENTORY INFORMATION:
This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA).

MISCELLANEOUS INFORMATION:
No toxic chemical(s) subject to the reporting requirements of section 313 Title III and of 40 CFR 372 are present.

11. DISCLAIMER

****

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.

****

END OF MSDS

****

SAFETY DATA SHEET

Revision Date 19-Aug-2019 **Revision Number** 5

1. Identification

Product Name **Magnesium Powder**

Cat No. : **M7-100**

Synonyms Magnesium Metal

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA:
800-424-9300
CHEMTREC®, Outside the USA:
001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Substances/mixtures which, in contact with water, emit flammable gases	Category 1
Pyrophoric solids	Category 1

Label Elements

Signal Word
Danger

Hazard Statements
In contact with water releases flammable gases which may ignite spontaneously
Catches fire spontaneously if exposed to air

Precautionary Statements
Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Do not allow contact with air
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from any possible contact with water, because of violent reaction and possible flash fire
Handle under inert gas. Protect from moisture
Skin
Brush off loose particles from skin. Immerse in cool water/wrap with wet bandages
Fire
In case of fire: Use fire-fighting equipment on basis class D for extinction
Storage
Store under an inert atmosphere
Store in a dry place. Store in a closed container
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Magnesium, powder	7439-95-4	>99

4. First-aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects None reasonably foreseeable.

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media No information available

Flash Point No information available

Method - No information available

Autoignition Temperature 472.8 °C / 883 °F

Explosion Limits

Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
None known
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
0	4	2	W

6. Accidental release measures

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.
Environmental Precautions See Section 12 for additional ecological information. Should not be released into the environment.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

Storage Keep container tightly closed in a dry and well-ventilated place. Store under an inert atmosphere.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies.

Engineering Measures Use explosion-proof electrical/ventilating/lighting/equipment. Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Long sleeved clothing.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if

exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Silver
Odor	Odorless
Odor Threshold	No information available
pH	7
Melting Point/Range	651.1 °C / 1204 °F
Boiling Point/Range	1107.2 °C / 2025 °F
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	1.74 (H2O=1)
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	472.8 °C / 883 °F
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Mg
Molecular Weight	24.305

10. Stability and reactivity

Reactive Hazard Yes

Stability Pyrophoric: Spontaneously flammable in air. Reacts violently with water, liberating highly flammable gases.

Conditions to Avoid Exposure to air. Ignites on contact with oxygen or air.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use conditions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Magnesium, powder	>2000 mg/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Magnesium, powder	7439-95-4	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

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Persistence and Degradability Insoluble in water

Bioaccumulation/ Accumulation No information available.

Mobility Is not likely mobile in the environment due its low water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN1418
Proper Shipping Name MAGNESIUM, POWDER
Hazard Class 4.3
Subsidiary Hazard Class 4.2
Packing Group II

TDG

UN-No UN1418
Proper Shipping Name MAGNESIUM ALLOYS, POWDER
Hazard Class 4.3
Subsidiary Hazard Class 4.2
Packing Group II

IATA

UN-No UN1418
Proper Shipping Name MAGNESIUM ALLOYS POWDER
Hazard Class 4.3
Subsidiary Hazard Class 4.2

Packing Group II

IMDG/IMO

UN-No UN1418
Proper Shipping Name MAGNESIUM POWDER
Hazard Class 4.3
Subsidiary Hazard Class 4.2
Packing Group II

15. Regulatory information

United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Magnesium, powder	7439-95-4	X	ACTIVE	-

Legend:
TSCA - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Magnesium, powder	7439-95-4	X	-	231-104-6	X	-	X	X	KE-22673

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Magnesium, powder	X	X	X	-	X

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard

Magnesium, powder	Theft STQs - 100lb (powder)

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Revision Date 19-Aug-2019
Print Date 19-Aug-2019
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

HMIS®

HEALTH	**2**	**REACTIVITY**	**0**
FLAMMABILITY	**3**	**PERSONAL PROTECTION**	**B**

Identity (As Used on Label and List) EPA Reg. No. 211-32-11694
42620 **Medaphene Plus Country Garden Disinfectant Spray**

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION I

Manufacturer's Name ITW Dymon	**Emergency Telephone Number** 1-800-535-5053
Address (Number, Street, City, State, and ZIP Code) 805 East Old 56 Highway	**Telephone Number for Information** 1-913-397-9889
Olathe, Kansas 66061	**Date Prepared** August 18, 2005
	Signature of Preparer (Optional) Regulatory Dept.

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	% (Opt.)
Ethanol	64-17-5	1000 ppm	1000 ppm		60 - 100 %
Isobutane	75-28-5	800 ppm	800 ppm		10 - 30 %
Propane	74-98-6	1000 ppm	2500 ppm		1 - 5 %
Orthophenylphenol*	90-43-7	None estab.	None estab.		<1%

*SARA Title III Section 313 Reportable

TSCA: All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.
Any substance listed as hazardous by the States of California, Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania or Texas is described above if known present in regulated concentrations.

SECTION III Physical/Chemical Characteristics

Boiling Point Concentrate			
Pressure (psig. @ 70° F)	212° F	**Specific Gravity (H_2O = 1) 70°F** Concentrate	0.824
Vapor Density (AIR = 1)	No Data	**Melting Point**	No Data
Solubility in Water	No Data	**Evaporation Rate (Ethyl Ether = 1)**	No Data
Appearance and Odor - Clear liquid with an alcohol and floral scent in an aerosol can.	Complete	**pH**	No Data

SECTION IV - Fire and Explosion Hazard Data

VOC's--This product contains 669 grams per liter or 89.5% by weight VOC's.

USA Flame Projection Test
>18", No Flashback (Flammable)

Extinguishing Media	Flammable Limits	LEL	UEL
Use carbon dioxide, dry chemical, foam.	No Data	No Data	No Data

Special Fire Fighting Procedures - Use water spray to keep containers cool and vapors down. Do not allow runoff to enter sewers or public watercourses. Wear self-contained breathing apparatus in chemical fires.

Unusual Fire and Explosion Hazards -
Aerosol container (pressurized) may burst if heated over 130° F.

SECTION V - Reactivity Data

Stability	**Unstable**		**Conditions to Avoid** - Extreme heat, direct sunlight
	Stable	X	

Incompatibility (Materials to Avoid) -
Strong acids and oxidizers.

Hazardous Decomposition or Byproducts -
Carbon dioxide and carbon monoxide

Hazardous Polymerization	**May Occur**		**Conditions to Avoid** - None known
	Will Not Occur	X	

SECTION VI - Health Hazard Data

Route(s) of Entry	**Eyes?**	**Inhalation?**	**Skin?**	**Ingestion?**
	Yes	Yes	Yes	No

Health Hazards (Acute and Chronic) – Will cause eye irritation upon exposure and skin irritation with prolonged exposure. Can be harmful if swallowed or if spray mist is inhaled.

Carcinogenicity:	**NTP?**	**IARC Monographs?**	**OSHA Regulated?**
None known	No	No	No

Prop 65 Warning: This product contains a chemical (Orthophenylphenol) known to the State of California to cause cancer.

Signs and Symptoms of Exposure – If in eyes: Burning sensation, watering, or redness. **If on skin:** Redness, irritation, or burning sensation with prolonged exposure. **If spray mist is inhaled:** Coughing, stupor, drowsiness or loss of consciousness with prolonged breathing of vapors. **If swallowed:** Possible gastrointestinal irritation or disturbance.

Medical Conditions Generally Aggravated by Exposure – None known.

Emergency and First Aid Procedures:
Eyes - Flush with water for 15 minutes. **Skin** – Wash liberally with soap and water. **If on clothes** – Wash before reuse. **Inhalation** – Remove to fresh air. **Ingestion** – if patient is conscious and alert, dilute by drinking large quantities of water. Do not induce vomiting without medical advice. Always get medical attention when product is swallowed or when symptoms are significant or persist.

SECTION VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled -
Small spills (less than 1 gallon) may be contained and left to evaporate. Note: Dilution with water will reduce flash point.
Large spills (more than 1 gallon) should be contained and collected (by absorption or vacuuming) then evaporated or disposed of properly.

Waste Disposal Method – This product is considered a RCRA Hazardous Waste for flammability (D001) as identified in Federal Regulations 40 CFR 261. Dispose of product by using in accordance with label directions or in compliance with local, state, and federal laws and regulations (contact local or state environmental agency for specific rules).

Precautions to be Taken in Handling and Storing -
Do not contaminate water, food or feed. Do not reuse empty containers. Keep containers clean and closed.
KEEP OUT OF REACH OF CHILDREN. Do not store near ignition sources or at temperatures above 120°F.

SECTION VIII - Control Measures

Respiratory Protection (Specify Type) – General ventilation is normally adequate. Do not create or inhale mists or vapors. Use an approved vapor respirator in tight or close areas.

Ventilation	**Local Exhaust** – Not usually necessary	**Special** - None
	Mechanical (General) - Normally sufficient	**Other** - None

Protective Gloves - Yes (Rubber) | **Eye Protection** - Yes (goggles or approved safety glasses)

Other Protective Clothing or Equipment - Not usually necessary.

Work/Hygienic Practices – Wash hands after using. Do not get into eyes, on skin, or clothing. May be harmful if swallowed. Protect food and drink from contamination by product.

WARNING! The use of this product is beyond the control of the manufacturer, therefore, no guarantee, expressed or implied, is made as to the effects of such use or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damages, resulting from its misuse as such, or in combination with other materials. The manufacturer warrants only that this product meets the manufacturer's specifications for such a product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER, OF THIS PRODUCT. THE MANUFACTURER SHALL BE IN NO WAY RESPONSIBLE FOR THE IMPROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the manufacturer for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

SAFETY DATA SHEET

DOW AGROSCIENCES LLC

Product name: MILESTONE™ Herbicide

Issue Date: 08/29/2019
Print Date: 08/29/2019

DOW AGROSCIENCES LLC encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

1. IDENTIFICATION

Product name: MILESTONE™ Herbicide

Recommended use of the chemical and restrictions on use
Identified uses: End use herbicide product

COMPANY IDENTIFICATION
DOW AGROSCIENCES LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number: 800-992-5994
info@corteva.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 352-323-3500

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with 29 CFR 1910.1200
Not a hazardous substance or mixture.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Aminopyralid Triisopropanolamine Salt	566191-89-7	40.6%

Triisopropanolamine	122-20-3	1.5%
Balance	Not available	57.9%

4. FIRST AID MEASURES

Description of first aid measures
General advice:
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture
Hazardous combustion products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters
Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice. Smoking, eating and drinking should be prohibited in the application area. Take care to prevent spills, waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage: Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers**:** None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Triisopropanolamine	Dow IHG	TWA	10 mg/m3

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

Other protection: No precautions other than clean body-covering clothing should be needed.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Color	Brown
Odor	Mild
Odor Threshold	No data available
pH	7.3 *pH Electrode*
Melting point/range	No data available
Freezing point	< -10 °C (< 14 °F)
Boiling point (760 mmHg)	No data available
Flash point	**closed cup** > 100 °C (> 212 °F) *Pensky-Martens Closed Cup ASTM D 93*
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available

Relative Density (water = 1)	No data available
Water solubility	Soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	none below 400 degC
Decomposition temperature	No data available
Dynamic Viscosity	12.2 cP at 20 °C (68 °F) *EPA OPPTS 830.7100 (Viscosity)*
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Liquid Density	1.1401 g/mL at 20 °C (68 °F) *Digital density meter*
Molecular weight	No data available
Surface tension	54.4 mN/m at20 °C (68 °F)

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: No decomposition if stored and applied as directed. Stable under normal conditions.

Possibility of hazardous reactions: None known.
No hazards to be specially mentioned.

Conditions to avoid: None known.

Incompatible materials: Avoid contact with: Strong oxidizers.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Hydrogen chloride. Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product:
LD50, Rat, male and female, > 5,000 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:
LD50, Rat, male and female, > 5,000 mg/kg

Acute inhalation toxicity
No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

As product:
LC50, Rat, male and female, 4 Hour, dust/mist, > 5.79 mg/l

Skin corrosion/irritation
Essentially nonirritating to skin.

Serious eye damage/eye irritation
Essentially nonirritating to eyes.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
For similar active ingredient(s). Aminopyralid. Did not cause cancer in laboratory animals.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
For similar active ingredient(s). Aminopyralid. In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 360 mg/l, OECD Test Guideline 203 or Equivalent

LC50, Cyprinodon variegatus (sheepshead minnow), static test, 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 460 mg/l

LC50, saltwater mysid Mysidopsis bahia, static test, 96 Hour, > 104 mg/l

Acute toxicity to algae/aquatic plants
For similar material(s):
Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

For similar material(s):
ErC50, Myriophyllum spicatum, 14 d, 0.363 mg/l

For similar material(s):
NOEC, Myriophyllum spicatum, 14 d, 0.0639 mg/l

For similar material(s):
ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 1,000 mg/l

Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

dietary LC50, Colinus virginianus (Bobwhite quail), > 21422mg/kg diet.

oral LD50, Colinus virginianus (Bobwhite quail), > 10,000 ppm

oral LD50, Apis mellifera (bees), > 460micrograms/bee

contact LD50, Apis mellifera (bees), > 460micrograms/bee

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 14 d, survival, > 10,000 mg/kg

Persistence and degradability

Aminopyralid Triisopropanolamine Salt
Biodegradability: For similar material(s): Aminopyralid. Material is not readily biodegradable according to OECD/EEC guidelines.

Triisopropanolamine
Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). Biodegradation rate may increase in soil and/or water with acclimation. Material is not readily biodegradable according to OECD/EEC guidelines.
10-day Window: Fail
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 2.35 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 3 Hour
Method: Estimated.

Balance
Biodegradability: No relevant data found.

Bioaccumulative potential

Aminopyralid Triisopropanolamine Salt
Bioaccumulation: For similar active ingredient(s). Aminopyralid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Triisopropanolamine
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): -0.015 at 23 °C Measured
Bioconcentration factor (BCF): < 0.57 Fish 42 d Measured

Balance
Bioaccumulation: No relevant data found.

Mobility in soil

Aminopyralid Triisopropanolamine Salt
For similar active ingredient(s).
Aminopyralid.
Potential for mobility in soil is very high (Koc between 0 and 50).

Triisopropanolamine
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 10 Estimated.

Balance
No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Aminopyralid Triisopropanolamine Salt)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Aminopyralid Triisopropanolamine Salt
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(Aminopyralid Triisopropanolamine Salt)
UN number	UN 3082
Class	9
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
No SARA Hazards

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	**CASRN**

Triisopropanolamine 122-20-3

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

United States TSCA Inventory (TSCA)
This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Federal Insecticide, Fungicide and Rodenticide Act
EPA Registration Number: 62719-519
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Causes moderate eye irritation

16. OTHER INFORMATION

Hazard Rating System
NFPA

Health	Flammability	Instability
1	1	0

Revision
Identification Number: 266154 / A211 / Issue Date: 08/29/2019 / Version: 9.1
DAS Code: GF-871
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

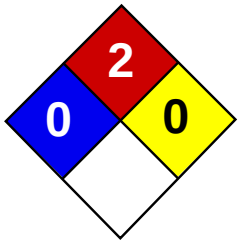
Dow IHG	Dow Industrial Hygiene Guideline
TWA	Time weighted average

Full text of other abbreviations
AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International

Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US



Health	0
Fire	2
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Mineral spirits MSDS

Section 1: Chemical Product and Company Identification

Product Name: Mineral spirits

Catalog Codes: SLM3616

CAS#: 64475-85-0

RTECS: WJ8925000

TSCA: TSCA 8(b) inventory: Mineral spirits

CI#: Not applicable.

Synonym:

Chemical Name: Not available.

Chemical Formula: Not available.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Mineral spirits	64475-85-0	100

Toxicological Data on Ingredients: Mineral spirits LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 245°C (473°F)

Flash Points: CLOSED CUP: 38°C (100.4°F).

Flammable Limits: LOWER: 1%

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe gas/ fumes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: Not available.

Color: Clear Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 148°C (298.4°F)

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 0.74 (Water = 1)

Vapor Pressure: 2 mm of Hg (@ 20°C)

Vapor Density: 4.9 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: The substance is toxic to lungs, the nervous system.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 3: Combustible liquid with a flash point greater than 37.8C (100F).

Identification: : Petroleum distillate, n.o.s. (mineral spirits) : UNNA: 1268 PG: III

Special Provisions for Transport: No DOT, ref 49CFR, 173.150

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Mineral spirits

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R10- Flammable. R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 0

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 10:50 AM

Last Updated: 06/07/2013 12:00 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.

AMR R925

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-3; Flammability-0; Reactivity-0; Special- -	**HMIS Rating:** Health-3; Flammability-0; Reactivity-0; Personal Protection-E
Manufacturer's Name: **AMREP, INC.** Address: 990 Industrial Park Drive Marietta, GA 30062	**DOT Hazard Classification:** Corrosive Material, 8 **Identity** (trade name as used on label): **MISTY BOLEX**
Date Prepared: 07/13/94 Prepared By: ES	**MSDS Number:** R 925 Revision -8
Information Calls: (770)422-2071 **EMERGENCY RESPONSE NUMBER: 1(800)255-3924**	NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HYDROCHLORIC ACID	7647-01-0	Yes	5	5	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 212°F	**Specific Gravity** (H2O=1): 1.05
Vapor Pressure: PSIG @ 70°F (Aerosols): N/A	**Vapor Pressure** (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/A	**Evaporation Rate** (water= 1): 1
Solubility in Water: Total	**Water Reactive:** None
Appearance and Odor: White fluid with mint fragrance.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) N/A	Auto Ignition Temperature N/A	Flammability Limits in Air by % in Volume: % LEL: N/A % UEL: N/A
FLASH POINT AND METHOD USED (non-aerosols): None **EXTINGUISHER MEDIA:** Non-Combustible.	**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH approved breathing apparatus & full protective gear when fighting fires. Spray containers with water to keep cool & prevent ruptures.	
Unusual Fire & Explosion Hazards: Avoid exposure to metals, oxidants which might product flammable hydrogen gas.		

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION** [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Bases, metals, mercuric sulfate, carbides of calcium, cesiam, rubidium.	**Conditions to Avoid:** Contact with strong bases can cause violent reaction generating large amounts of heat.
Hazardous Decomposition Products: Hydrogen gas.	

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [X] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS

Inhalation: Irritant causing burning, choking, coughing, headache.

Eye Contact: Irritation, severe burns & permanent damage including blindness. **Skin Contact:** Burning, irritation, dermatitis.

Ingestion: Unlikely route-causes severe burns to internal organs.

CHRONIC EFFECTS: None known.

Medical Conditions Generally Aggravated by Exposure: Skin, eye, mucous membrane irritation.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Wash eyes for 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing, wash skin with water for 15 minutes.

Inhalation: Move to fresh air. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink 3 to 4 glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): Approved self-contained breathing apparatus when use concentrations exceed 100 ppm HCl vapors.

Protective Gloves: Neoprene. **Eye Protection:** Chemical goggles or face shield.

Ventilation Requirements: As necessary to maintain air concentration below 5 ppm at all times.

Other Protective Clothing & Equipment: Neoprene or PVC rain suit & boots in case of fire. Safety showers & eyewash stations should be available.

Hygienic Work Practices: Wash hands after use. Do not eat, drink or smoke in immediate area.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Contain fluid by diking. Neutralize with soda ash or baking soda.

Waste Disposal Methods: Neutralize material may be washed down the sewer. Absorbed material to be boxed and disposed of in compliance with local, state and federal regulations.

Precautions To Be Taken In Handling & Storage: Store in closed labeled containers. Keep in cool, metal free area for not more than one year.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Do not store near strong alkalies or other reactive materials.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

THIS MSDS IS CURRENT AS OF JANUARY 10, 2000. **The DATE PREPARED section is the original date assembled and remains current until a change is necessary. This is tracked internally at the manufacturer by these date codes and therefore must remain as the originating date.**

DOW CORNING

DOW CORNING CORPORATION
Material Safety Data Sheet

MOLYKOTE(R) 1292 LONG LIFE BEARING GREASE

1. PRODUCT AND COMPANY IDENTIFICATION

Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

24 Hour Emergency Telephone: (989) 496-5900
Customer Service: (989) 496-6000
Product Disposal Information: (989) 496-6315
CHEMTREC: (800) 424-9300

MSDS No.: 01908260 Revision Date: 2012/10/08

Generic Description: Fluorosilicone grease.
Physical Form: Grease
Color: White
Odor: Slight odor

NFPA Profile: Health 2 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause mild irritation.

Skin: No significant irritation expected from a single short-term exposure.

Inhalation: Irritates respiratory passages very slightly.

Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin: Repeated or prolonged exposure may cause irritation.

Inhalation**:** No known applicable information.

Oral: Repeated ingestion or swallowing large amounts may injure internally.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

None present. This is not a hazardous material as defined in the OSHA Hazard Communication Standard.

4. FIRST AID MEASURES

Eye:	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.
Skin:	No health effects expected. If irritation does occur flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
Inhalation:	If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
Oral:	If irritation or discomfort occur, obtain medical advice.
Notes to Physician:	Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point:	> 214 °F / > 101.1 °C (Closed Cup)
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.
Extinguishing Media:	On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO2), dry chemical or water spray. Water can be used to cool fire exposed containers.
Fire Fighting Measures:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire Hazards:	None.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up:	Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See Section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Traces of benzene (carcinogen) may form if heated in air above 300°F (149°C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements. This material may form highly toxic vapors of trifluoropropionaldehyde if heated in air above 300° F (149° C). Provide ventilation to control vapor exposure (inhalation guidelines have not been established). Avoid eye contact. Do not take internally. Avoid skin contact.

Use reasonable care and store away from oxidizing materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

There are no components with workplace exposure limits.

Engineering Controls

Local Ventilation:	None should be needed.
General Ventilation:	Recommended.

Personal Protective Equipment for Routine Handling

Eyes:	Use proper protection - safety glasses as a minimum.
Skin:	Washing at mealtime and end of shift is adequate.
Suitable Gloves:	Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Inhalation:	No respiratory protection should be needed.
Suitable Respirator:	None should be needed.

Personal Protective Equipment for Spills

Eyes:	Use proper protection - safety glasses as a minimum.
Skin:	Washing at mealtime and end of shift is adequate.
Inhalation/Suitable Respirator:	No respiratory protection should be needed.
Precautionary Measures:	Avoid eye contact. Do not take internally. Avoid skin contact. Use reasonable care.
Comments:	Traces of benzene (carcinogen) may form if heated in air above 300°F (149°C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements. This material may form highly toxic vapors of trifluoropropionaldehyde if heated in air above 300° F (149° C). Provide ventilation to control vapor exposure (inhalation guidelines have not been established).

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Grease
Color:	White
Odor:	Slight odor
Specific Gravity @ 25°C:	1.28
Viscosity:	Not determined.
Freezing/Melting Point:	Not determined.
Boiling Point:	Not determined.
Vapor Pressure @ 25°C:	Not determined.
Vapor Density:	Not determined.
Solubility in Water:	Not determined.
pH:	Not determined.
Volatile Content:	Not determined.
Flash Point:	> 214 °F / > 101.1 °C (Closed Cup)
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.

Note: The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

Conditions to Avoid: None.

Materials to Avoid: Oxidizing material can cause a reaction.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Fluorine compounds. Nitrogen oxides. Silicon dioxide. Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Component Toxicology Information

This material may form highly toxic vapors of Trifluoropropionaldehyde if heated in air above 300 (degrees) F (149 degrees C). Provide ventilation to control vapor exposure (inhalation guidelines have not been established).

Special Hazard Information on Components

No known applicable information.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100

Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal. Call (989) 496-6315, if additional information is required.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

Call Dow Corning Transportation, (989) 496-8577, if additional information is required.

15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355):
None.

Section 304 CERCLA Hazardous Substances (40 CFR 302):
None.

Section 311/312 Hazard Class (40 CFR 370):

Acute: No
Chronic: No
Fire: No
Pressure: No
Reactive: No

Section 313 Toxic Chemicals (40 CFR 372):

None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

Supplemental State Compliance Information

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

New Jersey

CAS Number	Wt %	Component Name
63148-56-1	70.0 - 90.0	Trifluoropropylmethyl siloxane, trimethyl-terminated
272777-01-2	10.0 - 30.0	Alkyl/fluoroalkyl- substituted arylamine diisocyanate reaction produc

Pennsylvania

CAS Number	Wt %	Component Name
63148-56-1	70.0 - 90.0	Trifluoropropylmethyl siloxane, trimethyl-terminated
272777-01-2	10.0 - 30.0	Alkyl/fluoroalkyl- substituted arylamine diisocyanate reaction produc

MOLYKOTE(R) 1292 LONG LIFE BEARING GREASE

16. OTHER INFORMATION

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

(R) indicates Registered Trademark

The Procter & Gamble Company
P&G Household Care
Fabric & Home Care Innovation Center
5299 Spring Grove Avenue
Cincinnati, OH 45217-1087

MATERIAL SAFETY DATA SHEET

MSDS #: RQ1007735 Issue Date: 09/24/10
Supersedes: RQ1007300 Issue Date: 09/09/10

SECTION I - PRODUCT IDENTIFICATION

Identity: **Multi-Purpose Liquid Hard Surface Cleaner** **Finished Product**

Brands: **MR. CLEAN MULTI-SURFACES (Meadows & Rain; Lavender, Vanilla & Comfort; Hawaiian Aloha, New Zealand; Gain Scent; Apple Mango Tango Scent)**

P&G Telephone Number: 1-800-867-2532 or call Local Poison Control Center or your physician.

SECTION II - HAZARDS IDENTIFICATION

Potential Health Hazards (Acute and Chronic): (See Section 11 for more information)

Ingestion: May be harmful if swallowed.

Eye Contact: Mild eye irritant.

Skin Contact: Mild skin irritant.

Inhalation: N/A

Signs and Symptoms of Exposure:

Ingestion: Oral ingestion may result in transient system effects (ataxia and muscle weakness) and/or gastrointestinal irritation with nausea, vomiting or diarrhea. This product contains alcohol ethoxylates. Large ingestions (>2 ml/kg) may also cause symptoms of alcohol-like intoxication, lack of coordination, drowsiness, inarticulateness or ataxia. Alcohol ethoxylates may contribute to central nervous system symptoms. Possible mile gastrointestinal irritation with nausea, vomiting and/or diarrhea. Large ingestions may cause temporary dizziness, lack or coordination and headache.

Eye Contact: Instillation into the eye may result in transient superficial effects similar to those produced by mild toilet soaps and detergents.

Skin Contact: Use on irritated or extremely dry skin may aggravate the existing condition.

Inhalation: N/A

Medical Conditions Generally Known to be Aggravated by Exposure: N/A

Potential Environmental Effects: (See Section 12 for more information)

SECTION III - COMPOSITION AND INGREDIENTS

Ingredients listed on the product label are: Cleaning agents (anionic and nonionic surfactants), quality control agents, perfume, colorant and water.

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200. and/or WHMIS under the HPA:

Chemical Name	Common Name	CAS No.	Composition Range	TLV/LD50/LC50
Alcohol ethoxylates		68439-46-3	1-5%	LD50 (rat, oral) = 200-2000 mg/kg

SECTION IV – FIRST AID INFORMATION

First Aid Procedures:

Ingestion: Drink 1-2 glasses of water and call a physician or poison control center (product contains alcohol ethoxylates). Do not induce vomiting unless they tell you to do so.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice if irritation persists.

Skin: Thoroughly wash exposed area with soap and water and discontinue use. Remove contaminated clothing. If irritation persists, call a physician.

Inhalation: Remove to fresh air.

Note to Physician: (if applicable): N/A

Other: Consumer product package has the following precautionary statement: "**CAUTION: EYE IRRITANT. KEEP OUT OF REACH OF CHILDREN.** Avoid contact with eyes. If in eyes, hold eyes open and rinse gently with water for 15-20 minutes. If wearing contacts, remove lenses after first 5 minutes and continue rinsing. If irritation persists, call a physician. If swallowed, drink 1-2 glasses of water and call a physician or poison control center (product contains alcohol ethoxylates) – do not induce vomiting unless they tell you to do so. Have the product container or label with you when calling or going for treatment.

SECTION V - FIRE FIGHTING INFORMATION

Flash Point (Method Used): >200°F / >93.3°C (ASTM D-93 Pensky-Martens Closed Cup).

Flammable Properties:
Upper Flammable Limit: N/A
Lower Flammable Limit: N/A

Explosive Limits: UEL: N/A LEL: N/A

Auto-ignition Temperature: N/A

Hazardous Combustion Products: None known.

Explosion Data (Sensitivity to Mechanical Impact): N/A
Explosion Data (Sensitivity to Static Discharge): N/A

Extinguishing Media:
Suitable: CO_2, water, dry chemical or "alcohol" foam. Use water to keep fire-exposed container cool.
Unsuitable: N/A

Protection of Firefighters:
Specific Hazards Arising from the Material: None.
Protective Equipment and Precautions for Firefighters: No unusual precautions necessary.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: See Section VIII below.

Environmental Precautions: DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS. Do not landfill. Small (household) quantities may be disposed of via sewer with large quantities of water. Incineration is preferred where permitted.

Methods for Containment: Prevent spills from reaching a waterway.

Methods for Cleanup: Use water spray to dilute and/or wash away spills to avoid exposure and to protect persons working to stop/repair leak. Absorb spilled product onto absorbent material.

Other Information: (if applicable) N/A

SECTION VII – HANDLING AND STORAGE

Precautions To Be Taken in Handling: Handle in a well ventilated, cool and dry area.

Precautions To Be Taken in Storage: Storage must be in a well ventilated, cool and dry area.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:
N/A

Engineering Controls:

Ventilation *Mechanical (General):* Normal/general dilution ventilation is acceptable.

Personal Protective Equipment (PPE):
Eye/Face Protection: None required with normal consumer use.
Occupational Setting: For splash protection, use chemical goggles. Eye Wash fountain is desirable.
Skin Protection: None required with normal consumer use.
Occupational Setting: Protective gloves (rubber, neoprene) should be used for prolonged direct contact.
Respiratory Protection: None required with normal use.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance (color, physical form, shape): Colored liquids (blue, red, pinkish/purple and orange). Packaged in a pourable plastic bottle.

Flash Point (Method Used): >200°F / >93.3°C (ASTM D-93 Pensky-Martens Closed Cup.)

Odor: Products are perfumed.

Reserve Alkalinity: N/A

Odor Threshold: N/A

Solubility in Water: Completely

Physical State: Liquid.

Decomposition Temperature: N/A

Vapor Pressure (mm Hg): N/A

Evaporation Rate (nBuOAc=1): Unknown

Vapor Density (Air=1): N/A

Specific Gravity/Density: 1.019 g/cm^3

Boiling Point: N/A

Melting/Freezing Point: N/A

Partition Coefficient (n-octanol/water): N/A

pH (neat): 9.5

Volatile Organic Compound (VOC): Products comply with US State and Federal regulations for VOC content.

SECTION X – STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid: None.

Incompatible Materials: None

Hazardous Decomposition Products: None known

Possibility of Hazardous Reactions: None known

SECTION XI - TOXICOLOGICAL INFORMATION

Chronic Effects: No chronic health effects reported.

Target Organs: No target organs reported.

Carcinogenicity: This finished consumer product is not carcinogenic.

NTP: No
IARC: No
All product ingredients were checked for NTP and IARC carcinogen listings relevant to this product formulation.

SECTION XII - ECOLOGICAL INFORMATION

No concerns at relevant environmental concentrations.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Disposal is to be performed in compliance with federal, state/provincial and local regulations.

Non-Household Setting (US Federal): Products covered by this MSDS, in their original form, when disposed as waste, are considered non-hazardous waste according to Federal RCRA regulations (40 CFR 261).

California Hazardous Waste: Yes

Household Use: Consumers may dispose of small (household) quantities down the drain with large quantities of water. Discard empty container in trash or rinse and recycle container where facilities exist.

SECTION XIV - TRANSPORT INFORMATION

Ground Transport (US DOT): Not regulated.

Air Transport (IATA): Not regulated.

Marine/Water Transport (IMDG): Not regulated.

SECTION XV - REGULATORY INFORMATION

United States

All intentionally-added components of these products are listed on the US TSCA Inventory.
EPA Registration Number: N/A

SARA 313/302/304/311/312 chemicals: None.

California: These products have been evaluated and do not require warning labeling under California Proposition 65.
California Registration Number: N/A

State Right-to-Know and CERCLA:
The following ingredients present in the finished products at >1% (or 0.1% for carcinogens) are listed on state right-to-know lists or state worker exposure lists

Ingredient	CAS #	Max Level	CERCLA RQ	State				
				IL	MA	NJ	PA	RI
None								

Canada

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all information required by the Controlled Products Regulations.

SECTION XVI - OTHER INFORMATION

Perfumes contained within the products covered by this MSDS comply with appropriate IFRA guidance.

P&G Hazard Rating:	Health:	1	4=EXTREME
	Flammability:	0	3=HIGH
	Reactivity:	0	2=MODERATE
			1=SLIGHT
			0=NOT SIGNIFICANT

*N/A. - Not Applicable *N/K. - Not Known

Data supplied is for use only in connection with occupational safety and health.

DISCLAIMER: This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumed no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

Article I: Material Description

Common Name: Magnesium
Chemical Name: Mg
Trade Name: Magnesium Anode
CAS No.: 7439-95-4
EC No.: 231-104-6
Use: Cathodic Protection
NFPA Rating: 0-1-2-W

Article II: Physical Data

Boiling Point: 1110 °C (2030 °F)
Melting Point: 636-649 °C (1176-1200 °F)
Specific Gravity: 1.75 (H_2O = 1)
Density: 1.65-1.74 g/cm^3
Vapor Density Air: NA
Vapor Pressure: NA
Solubility in Water: NA
Appearance: Silver or grey solid
Odor: None
Evaporation Rate: NA
Percent Volatile by Volume: NA

Article III: Fire and Explosion Hazard Data

Flash Point: NA
Auto-Ignition Temperature: 648 °C (1202 °F)
Flammable Limits: NA
LEL: NA
UEL: NA

- Very finely divided, magnesium can be ignited at air temperatures below 482 °C (800 °F)

Extinguishing Media: Smother burning magnesium by covering with a metal extinguishing powder approved for use on magnesium fires such as G1 and MET-L-X.

Unusual Fire and Explosion Hazards: When heated in air to a temperature near its melting point, magnesium alloys ignite and burn with a white flame. Use of water on molten magnesium will produce hydrogen gas and may cause explosion.

Protective Fire-Fighting Equipment: Wear positive pressure self-contained breathing apparatus. Smother fires with dry graphite or other suitable dry powders. Do not use foam, halogenated extinguishing agents, or carbon dioxide. Protect eyes and skin against flying particles.

Article IV: Environmental and Disposal Information

Action to take for spills and leaks: Clean off and reuse. RCRA hazardous waste No. not federally regulated.

Article V: Reactivity Data

Stability: Stable. Reacts violently with halogens, chlorinated solvents, chloromethane. Air and moisture sensitive. Highly flammable.

Incompatibility (Materials to avoid): Acid and water. Magnesium reacts with acid or water to form hydrogen gas. If finely divided, its propensity to react and the reaction rate will increase.

Hazardous Decomposition Products: None under normal use or storage. See incompatibility statement above and fire and explosion hazard data in Article III for special situations.

Hazardous Polymerization: Will not occur.

Article VI: Health Hazard Data

Eye: Mechanical injury only

Skin absorption: Skin absorption is unlikely due to physical properties.

Skin contact: Mechanical injury only

Ingestion: Ingestion is unlikely due to physical state. If dusts are produced, amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of larger amounts could cause serious injury or even death (acute oral toxicity of magnesium is considered moderate).

Inhalation: Dust may cause irritation to upper respiratory tract.

Systematic & Other Effects: Based on available date, repeated exposures are not anticipated to cause any significant adverse effects.

Article VII: First Aid

Eyes: Irrigate immediately with water for at least five minutes.

Skin: Wash off dust in flowing water or shower

Ingestion: Induce vomiting if large amounts of dust are ingested. Search for immediate medical attention.

Inhalation: Remove to fresh air if dust inhalation effects occur. Consult a physician.

- Note to Physician: No specific antidote for dust inhalation. Treatment based on judgment of the physician in response to reactions of the patient.

Article VIII: Hazardous Ingredients and Occupational Exposure Limits

		OSHA-PEL		ACGIH-TLV		
		TWA	STEL	TWA	STEL	
Ingredient	CAS#	*A	*A	*A	*A	Typical %
Magnesium	7439-95-4 Fume / Dust	10A / (5A Resp)	-	10A	-	85 - 99
Aluminum	7429-90-5 Fume / Dust	5A / 15A (5A Resp)	-	5A / 10A (5A Resp)	-	0 - 20
Zinc	7440-88-6 Fume	5A	10A	5A	10A	0 - 5

- SARA SECTION 313: If the above ingredients are underlined, they are listed in 40 CFR 372.65 Superfund Amendments and Reauthorization Act (SARA) Section 313, and are present in quantity greater than the "de minimum" concentration. Therefore, those underlined ingredients are subject to the reporting requirements of SARA Section 313.

Article IX: Protection and Precautions

Eye and Skin Protection: Under normal conditions, no protective clothing is required. Use eye protection when grinding or cutting metal to prevent chips or fines from getting into eyes.

Respiratory Protection: Use with adequate ventilation to meet exposure limits as listed in Article VIII. Where exposure limit is or may be exceeded use NIOSH approved respiratory protection respirator for dust or fumes based on actual or potential airborne contaminants and their concentrations present.

Article X: Regulatory Information

Notice: The information herein is presented in good faith and believed to be accurate as of the issued date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its use complies with all federal, state and local laws and regulations.

Galvotec Alloys, Inc.
6712 S. 36th St.
McAllen, Tx. 78503
(956) 630-3500

Galvotec	Material Safety Data Sheet	Date Issued
		Apr 13, 2006
	Material Description	Last Revision
	Packaged Magnesium	Jan 16, 2015

Article I: Material Description

Common Name: Packaged Magnesium (anodes)
Composition:
Magnesium anode (Mg) – CAS # 7439-95-4
Powder,
a) Gypsum (Calcium Sulfate Dihydrate) – CAS#10101-78-9
b) Bentonite - CAS # 1302-78-9
c) Sodium Sulfate – CAS # 7757-82-6

Use: Cathodic Protection

Article II: Physical Data

Boiling Point: 1110 °C (2030 °F)
Melting Point: 636-788 °C (1176-1450 °F)
Specific Gravity: NA
Density: NA
Vapor Density Air: NA
Vapor Pressure: NA
Solubility in Water: NA (Mg) – 0.2% Powder
Appearance: Silver or grey solid (Mg) – grey dust (powder)
Odor: Earthy
Evaporation Rate: NA
Percent Volatile by Volume: NA

Article III: Fire and Explosion Hazard Data

Flash Point: NA
Auto-Ignition Temperature: 648 °C (1202 °F)
Flammable Limits: NA

Extinguishing Media: Smother burning magnesium by covering with a metal extinguishing powder approved for use on magnesium fires such as G1 and MET-L-X.
Unusual Fire and Explosion Hazards: When heated in air to a temperature near its melting point, magnesium alloys ignite and burn with a white flame. Use of water on molten magnesium will produce hydrogen gas and may cause explosion.
Protective Fire-Fighting Equipment: Wear positive pressure self-contained breathing apparatus. Smother fires with dry graphite or other suitable dry powders. Do not use foam, halogenated extinguishing agents, or carbon dioxide. Protect eyes and skin against flying particles.

Article IV: Environmental and Disposal Information

Action to take for spills and leaks: Clean off and reuse. (Mg)
Sweep or vacuum material from spillage into a waste container for disposal. Avoid dusting conditions. (Powder)

Article V: Reactivity Data

Stability: Mg - Stable. Reacts with halogens, chlorinated solvents, and chloromethane.
Powder - Stable

Incompatibility (Materials to avoid): Magnesium reacts with acid or water to form hydrogen gas. If finely divided, its propensity to react and the reaction rate will increase.
Hazardous Decomposition Products: None under normal use or storage.
Hazardous Polymerization: Will not occur.

Article VI: Health Hazard Data

Eye: Particles may cause irritation.
Skin contact: This product is not toxic.
Ingestion of powder: None Known
Inhalation: Dust may cause irritation to upper respiratory tract.

Article VII: First Aid

Eyes: Irrigate immediately with water for at least five minutes.
Skin: Wash off dust in flowing water or shower
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Remove to fresh air if dust inhalation effects occur. Consult a physician.

Article VIII: Protection and Precautions

Eye and Skin Protection: Under normal conditions, no protective clothing is required.
Respiratory Protection: Where exposure limit is or may be exceeded, use NIOSH approved respiratory protection. Powder contains small amounts of crystalline silica. Inhalation of large amounts of crystalline silica may cause pulmonary fibrosis.

Article IX: Regulatory Information

Notice: The information herein is presented in good faith and believed to be accurate as of the issued date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its use complies with all federal, state and local laws and regulations.

Galvotec Alloys, Inc.
6712 S. 36th St.
McAllen Tx. 78503
(956) 630-3500

Galvotec	Safety Data Sheet	Date Issued
		November 2018
	Material Description	Last Revision
	Magnesium Alloy H1	November 2018

Section 1 Identification

Product Name:	Magnesium Extrusion
Manufacturer Name:	Galvotec Alloys, Inc. 6712 S. 36TH Street McAllen, TX 78503, USA Tel: (956)630-3500
Emergency Tel:	N/A
Recommended Use:	Various
Restricted Use:	Avoid contact with acid and water

Section 2 Hazard (s) Identification

Relevant information:	Toxic gases and vapors may be released if involved in a fire. Slightly hazardous in case of skin contact, eye and ingestion.
Hazard description:	Solid flammable hazards to the environment.
Precautionary:	Use protective equipment indicated to protect their respiratory system and skin.
Labeled:	**Health 0** **Flammable 1** **Hazard 1**

Section 3 Composition / Information on Ingredients

Chemical Name:	Mg
Trade Name:	AZ Com
CAS No.:	7439-95-4
EC No.:	231-104-6
NFPA Rating:	0-1-2-W

Sectión 4	**First-aid Measures**
Eye contact:	Wash immediately with water for at least 15 minutes, lift and separate the eyelids to ensure the removal of the chemical, if the irritation persists repeat the wash and seek medical attention immediately.
Skin contact:	Remove contaminated clothing and footwear, wash the affected area with plenty of water and soap, at least 15 minutes, if the irritation persists, repeat the washing.
Inhalation:	Remove to fresh air if inhalation effects occur. If not breathing, administer artificial respiration. If you breathe with difficulty supply oxygen. Keep the victim warm and at rest
Ingestion:	Wash your mouth with water. If you are conscious, give plenty of water, do not induce vomiting. Keep the victim warm and at rest.
Effects Eye contact:	Burns, Redness.
Dermal contact:	Irritations, the penetration of the product, causes wounds of difficult healing
Inhalation:	It irritates the respiratory tract
Medical care: Treatment	N/A
Delayed effects:	Can cause gastrointestinal disorders, loss of appetite, weight loss
Known antidotes:	N/A

Section 5 Fire-fighting Measures

Flash Point:	Approximately 500 °C (932 °F)
Auto-Ignition Temperature:	648 °C (1202 °F)
Flammable Limits:	N/A
LEL:	N/A
UEL:	N/A • Very finely divided, magnesium can be ignited at air temperatures below 482 °C (800 °F)
Extinguishing Media:	Smother burning magnesium by covering with a metal extinguishing powder approved for use on magnesium fires such as G1 and MET-L-X.
Unusual Fire and Explosion Hazards:	When heated in air to a temperature near its melting point, magnesium alloys ignite and burn with a white flame. Use of water on molten magnesium will produce hydrogen gas and may cause explosion.
Protective Fire-Fighting Equipment:	Wear positive pressure self-contained breathing apparatus. Smother fires with dry graphite or other suitable dry powders. Do not use foam, halogenated extinguishing agents, or carbon dioxide. Protect eyes and skin against flying particles.

Section 6 Accidental Release Measures

Action to take for spills and leaks:	Restrict access to unnecessary people without proper protection. Clean and reuse, work in cool and well ventilated areas. Do not allow it to fall into water sources and sewers

Section 7 Handling and Storage

Handling:	No special gear required.
Storage:	Store in a dry, close place

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

		OSHA-PEL		ACGIH-TLV		
		TWA	STEL	TWA	STEL	
Ingredient	CAS#	*A	*A	*A	*A	Typical %
Magnesium	7439-95-4 Fume / Dust	10A / (5A Resp)	-	10A	-	85 - 99
Aluminum	7429-90-5 Fume / Dust	5A / 15A (5A Resp)	-	5A / 10A (5A Resp)	-	0 - 20
Zinc	7440-88-6 Fume	5A	10A	5A	10A	0 - 5

SARA SECTION 313: If the above ingredients are underlined, they are listed in 40 CFR 372.65 Superfund Amendments and Reauthorization Act (SARA) Section 313, and are present in quantity greater than the "de minimum" concentration. Therefore, those underlined ingredients are subject to the reporting requirements of SARA Section 313.

Eye Protection:	Not necessary. Safety glasses are required when cutting solid pieces.
Skin Protection:	Not necessary, gloves for the loaders. All employees should wash their hands before eating any food or drink.
Respiratory Protection:	Wear a mask in a dusty atmosphere.

Section 9 Physical and Chemical Properties

Physical State:	*Solid*
Boiling Point:	1110 °C (2030 °F)
Melting Point:	636-649 °C (1176-1200 °F)
Specific Gravity:	1.75 (H_2O = 1)
Density:	1.65-1.74 g/cm^3
Vapor Density Air:	N/A
Vapor Pressure:	N/A
Solubility in Water:	N/A
Appearance:	Silver or grey solid
Odor:	None
Evaporation Rate:	N/A
Percent Volatile by Volume:	N/A

Section 10 Stability and Reactivity

Stability:	Stable at ambient conditions. Reacts violently with halogens, chlorinated solvents, chloromethane. Air and moisture sensitive. Highly flammable.
Incompatibility (Materials to avoid):	Acid and water. Magnesium reacts with acid or water to form hydrogen gas. If finely divided, its propensity to react and the reaction rate will increase.
Hazardous Decomposition Products:	None under normal use or storage. See incompatibility statement above and fire and explosion hazard data in Article III for special situations.
Hazardous Polymerization:	Will not occur.

Section 11 Toxicological Information

Eye:	Mechanical injury only
Skin absorption:	Skin absorption is unlikely due to physical properties.
Skin contact:	Mechanical injury only
Ingestion:	Ingestion is unlikely due to physical state. If dusts are produced, amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of larger amounts could cause serious injury or even death (acute oral toxicity of magnesium is considered moderate).
Inhalation:	Dust may cause irritation to upper respiratory tract.
Systematic & Other Effects:	Based on available date, repeated exposures are not anticipated to cause any significant adverse effects.
Effects immediate	Irritation
Long-term Effects	Gastrointestinal disorders, lack of appetite, weight loss.

Section 12 Ecological Information

Ecotoxicity:	This product is not considered harmful to aquatic or terrestrial organisms, neither cause long-term adverse effects to the environment.
Persistence and Degradability:	N/A
Bio-Accumulative Potential:	Not established
Mobility in Soil:	No information available

Section 13 Disposal Consideration

Method of Disposal:	Metal boxes (box should include lid in case of powder or shavings).
Safe Handling:	N/A

Section 14 Transport Information

UNO Number:	1869
UNO Proper Shipping Name:	Do not transport with explosive substances, Water and acids (risk of explosion, hydrogen is formed) Air, Alcohols, Metalloid oxides, Sulphates, alkaline salts, Halogens, Halogen – halides, Non-metallic halides, Hydroxides. Alkaline Hydrocarbons halides, Oxidizing agents Nitrates, No metals, Metal oxides. Non-metallic, radioactive, or food oxides.
Proper shipping name UNO	N/A
Transport Hazard Class:	N/A

Section 15 Regulatory Information

Notice:	The information herein is presented in good faith and believed to be accurate as of the issued date shown. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its use complies with all federal, state and local laws and regulations.

Section 16 Other Information

R phrases *R 11*	Easily flammable
R 15:	It reacts with water releasing extremelly flammable gases.
R 35:	It causes burns.
S phrases: *S 7/8*	Keep the container tightly closed and in a dry place
S 43f	In case of fire, use sand or fire extinguisher class D.
Revision	Issued November 2018

Galvotec	Safety Data Sheet	Date Issued
		November 2018
	Material Description	Last Revision
	Packaged Magnesium	November 2018

Section 1 Identification

Product Name:	Magnesium Extrusion
Manufacturer Name:	Galvotec Alloys, Inc. 6712 S. 36TH Street McAllen, TX 78503, USA Tel: (956)630-3500
Emergency Tel:	N/A
Recommended Use:	Various
Restricted Use:	Avoid contact with acid and water

Section 2 Hazard (s) Identification

Relevant information:	Toxic gases and vapors may be released if involved in a fire. Slightly hazardous in case of skin contact, eye and ingestion.
Hazard description:	Solid flammable hazards to the environment.
Precautionary:	Use protective equipment indicated to protect their respiratory system and skin.
Labeled:	**Health 0** **Flammable 1** **Hazard 1**

Section 3 Composition / Information on Ingredients

Chemical Name:	Mg
Trade Name:	AZ Com
CAS No.:	7439-95-4
EC No.:	231-104-6
NFPA Rating:	0-1-2-W

Sectión 4	First-aid Measures
Eye contact:	Wash immediately with water for at least 15 minutes, lift and separate the eyelids to ensure the removal of the chemical, if the irritation persists repeat the wash and seek medical attention immediately.
Skin contact:	Remove contaminated clothing and footwear, wash the affected area with plenty of water and soap, at least 15 minutes, if the irritation persists, repeat the washing.
Inhalation:	Remove to fresh air if inhalation effects occur. If not breathing, administer artificial respiration. If you breathe with difficulty supply oxygen. Keep the victim warm and at rest
Ingestion:	Wash your mouth with water. If you are conscious, give plenty of water, do not induce vomiting. Keep the victim warm and at rest.
Effects Eye contact:	Burns, Redness.
Dermal contact:	Irritations, the penetration of the product, causes wounds of difficult healing
Inhalation:	It irritates the respiratory tract
Medical care: Treatment	N/A
Delayed effects:	Can cause gastrointestinal disorders, loss of appetite, weight loss
Known antidotes:	N/A

Section 5 Fire-fighting Measures

Flash Point:	Approximately 500 °C (932 °F)
Auto-Ignition Temperature:	648 °C (1202 °F)
Flammable Limits:	N/A
LEL:	N/A
UEL:	N/A • Very finely divided, magnesium can be ignited at air temperatures below 482 °C (800 °F)
Extinguishing Media:	Smother burning magnesium by covering with a metal extinguishing powder approved for use on magnesium fires such as G1 and MET-L-X.
Unusual Fire and Explosion Hazards:	When heated in air to a temperature near its melting point, magnesium alloys ignite and burn with a white flame. Use of water on molten magnesium will produce hydrogen gas and may cause explosion.
Protective Fire-Fighting Equipment:	Wear positive pressure self-contained breathing apparatus. Smother fires with dry graphite or other suitable dry powders. Do not use foam, halogenated extinguishing agents, or carbon dioxide. Protect eyes and skin against flying particles.

Section 6 Accidental Release Measures

Action to take for spills and leaks:	Restrict access to unnecessary people without proper protection. Clean and reuse, work in cool and well ventilated areas. Do not allow it to fall into water sources and sewers

Section 7 Handling and Storage

Handling:	No special gear required.
Storage:	Store in a dry, close place

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Ingredient	CAS#	OSHA-PEL TWA *A	OSHA-PEL STEL *A	ACGIH-TLV TWA *A	ACGIH-TLV STEL *A	Typical %
Magnesium	7439-95-4 Fume / Dust	10A / (5A Resp)	-	10A	-	85 - 99
Aluminum	7429-90-5 Fume / Dust	5A / 15A (5A Resp)	-	5A / 10A (5A Resp)	-	0 - 20
Zinc	7440-88-6 Fume	5A	10A	5A	10A	0 - 5

SARA SECTION 313: If the above ingredients are underlined, they are listed in 40 CFR 372.65 Superfund Amendments and Reauthorization Act (SARA) Section 313, and are present in quantity greater than the "de minimum" concentration. Therefore, those underlined ingredients are subject to the reporting requirements of SARA Section 313.

Eye Protection:	Not necessary. Safety glasses are required when cutting solid pieces.
Skin Protection:	Not necessary, gloves for the loaders. All employees should wash their hands before eating any food or drink.
Respiratory Protection:	Wear a mask in a dusty atmosphere.

Section 9 Physical and Chemical Properties

Physical State:	*Solid*
Boiling Point:	1110 °C (2030 °F)
Melting Point:	636-649 °C (1176-1200 °F)
Specific Gravity:	1.75 (H_2O = 1)
Density:	1.65-1.74 g/cm^3
Vapor Density Air:	N/A
Vapor Pressure:	N/A
Solubility in Water:	N/A
Appearance:	Silver or grey solid
Odor:	None
Evaporation Rate:	N/A
Percent Volatile by Volume:	N/A

Section 10 Stability and Reactivity

Stability:	Stable at ambient conditions. Reacts violently with halogens, chlorinated solvents, chloromethane. Air and moisture sensitive. Highly flammable.
Incompatibility (Materials to avoid):	Acid and water. Magnesium reacts with acid or water to form hydrogen gas. If finely divided, its propensity to react and the reaction rate will increase.
Hazardous Decomposition Products:	None under normal use or storage. See incompatibility statement above and fire and explosion hazard data in Article III for special situations.
Hazardous Polymerization:	Will not occur.

Section 11 Toxicological Information

Eye:	Mechanical injury only
Skin absorption:	Skin absorption is unlikely due to physical properties.
Skin contact:	Mechanical injury only
Ingestion:	Ingestion is unlikely due to physical state. If dusts are produced, amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of larger amounts could cause serious injury or even death (acute oral toxicity of magnesium is considered moderate).
Inhalation:	Dust may cause irritation to upper respiratory tract.
Systematic & Other Effects:	Based on available date, repeated exposures are not anticipated to cause any significant adverse effects.
Effects immediate	Irritation
Long-term Effects	Gastrointestinal disorders, lack of appetite, weight loss.

Section 12 Ecological Information

Ecotoxicity:	This product is not considered harmful to aquatic or terrestrial organisms, neither cause long-term adverse effects to the environment.
Persistence and Degradability:	N/A
Bio-Accumulative Potential:	Not established
Mobility in Soil:	No information available

Section 13 Disposal Consideration

Method of Disposal:	Metal boxes (box should include lid in case of powder or shavings).
Safe Handling:	N/A

Section 14 Transport Information

UNO Number:	1869
UNO Proper Shipping Name:	Do not transport with explosive substances, Water and acids (risk of explosion, hydrogen is formed) Air, Alcohols, Metalloid oxides, Sulphates, alkaline salts, Halogens, Halogen – halides, Non-metallic halides, Hydroxides. Alkaline Hydrocarbons halides, Oxidizing agents Nitrates, No metals, Metal oxides. Non-metallic, radioactive, or food oxides.
Proper shipping name UNO	N/A
Transport Hazard Class:	N/A

Section 15 Regulatory Information

Notice:	The information herein is presented in good faith and believed to be accurate as of the issued date shown. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its use complies with all federal, state and local laws and regulations.

Section 16 Other Information

R phrases *R 11*	Easily flammable
R 15:	It reacts with water releasing extremelly flammable gases.
R 35:	It causes burns.
S phrases: *S 7/8*	Keep the container tightly closed and in a dry place
S 43f	In case of fire, use sand or fire extinguisher class D.
Revision	Issued November 2018

SAFETY DATA SHEET

A03702007

Section 1. Identification

Product name : KRYLON® Industrial QUIK-MARK™ Solvent-Based Inverted Marking Paint (Fluorescent)
Orange

Product code : A03702007

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : Krylon Products Group
101 Prospect Avenue NW
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3266

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 47%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 47%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 45.6%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure. (lungs)

Precautionary statements

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : Get medical attention if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Lt. Aliphatic Hydrocarbon Solvent	27.74	64742-89-8
Propane	12.24	74-98-6
Talc	8.75	14807-96-6
Butane	5.76	106-97-8
n-Butyl Acetate	4.35	123-86-4
Mineral Spirits 140-Flash	1.3	64742-88-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not breathe vapor or mist. Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Lt. Aliphatic Hydrocarbon Solvent	None.
Propane	**NIOSH REL (United States, 10/2016).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
Talc	**NIOSH REL (United States, 10/2016).** TWA: 2 mg/m³ 10 hours. Form: Respirable fraction **ACGIH TLV (United States, 3/2016).** TWA: 2 mg/m³ 8 hours. Form: Respirable fraction
Butane	**NIOSH REL (United States, 10/2016).**

	TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2016).** STEL: 1000 ppm 15 minutes.
n-Butyl Acetate	**NIOSH REL (United States, 10/2016).** TWA: 150 ppm 10 hours. TWA: 710 mg/m³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes. **OSHA PEL (United States, 6/2016).** TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2016).** STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.
Mineral Spirits 140-Flash	**OSHA PEL (United States, 6/2016).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.

Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Propane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 1000 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 1000 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.
Butane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 800 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.
n-Butyl Acetate	**CA Alberta Provincial (Canada, 4/2009).** 15 min OEL: 200 ppm 15 minutes. 15 min OEL: 950 mg/m³ 15 minutes. 8 hrs OEL: 150 ppm 8 hours. 8 hrs OEL: 713 mg/m³ 8 hours. **CA British Columbia Provincial (Canada, 7/2016).**

Section 8. Exposure controls/personal protection

	TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 150 ppm 8 hours. TWAEV: 713 mg/m³ 8 hours. STEV: 200 ppm 15 minutes. STEV: 950 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours.
Mineral Spirits 140-Flash	**CA Québec Provincial (Canada, 1/2014).** TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 525 mg/m³ 8 hours.

Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
Propane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
Butane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
n-Butyl Acetate	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 7

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 1.5 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.9%
Upper: 9.5%

Vapor pressure : 101.3 kPa (760 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 0.84

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 22.625 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours
n-Butyl Acetate	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Talc	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
n-Butyl Acetate	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Talc	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
n-Butyl Acetate	Category 3	Not applicable.	Narcotic effects
Mineral Spirits 140-Flash	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Talc	Category 1	Inhalation	lungs
Butane	Category 2	Not determined	Not determined
Mineral Spirits 140-Flash	Category 1	Not determined	Not determined

Aspiration hazard

Name	Result
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Mineral Spirits 140-Flash	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
n-Butyl Acetate	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-Butyl Acetate	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1	2.1	2.1	2.1	2.1
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	Yes. The environmentally hazardous substance mark is not required.	No.
Additional information	- **ERG No.** 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2). **ERG No.** 126	- **ERG No.** 126	The environmentally hazardous substance mark may appear if required by other transportation regulations.	**Emergency schedules** F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

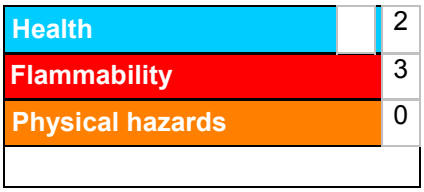
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

History

Date of printing : 11/8/2017

Date of issue/Date of revision : 11/8/2017

Date of previous issue : 5/18/2017

Version : 8

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient

Section 16. Other information

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

PURELL® Advanced Instant Hand Sanitizer

Version	Revision Date:	MSDS Number:	Date of last issue: 12/12/2014
1.1	02/10/2015	36762-00002	Date of first issue: 12/12/2014

SECTION 1. IDENTIFICATION

Product name : PURELL® Advanced Instant Hand Sanitizer

Manufacturer or supplier's details

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500
Akron OH 44311

Telephone : 1 (330) 255-6000

Emergency telephone : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use

Recommended use : Hand Sanitizer

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H226 Flammable liquid and vapor.
H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Ethanol	64-17-5	>= 50 - < 70
Propan-2-ol	67-63-0	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	Causes serious eye irritation.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.
Use only in an area equipped with explosion proof exhaust ventilation.

Advice on safe handling : Do not breathe vapors or spray mist.
Do not swallow.
Do not get in eyes.
Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice.
Non-sparking tools should be used.
Keep container tightly closed.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

Organic peroxides
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		STEL	1,000 ppm	ACGIH
Propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentration	Basis
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

Engineering measures : Minimize workplace exposure concentrations.
Use only in an area equipped with explosion proof exhaust ventilation.
Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and

use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material	:	Impervious gloves
Material	:	Flame retardant gloves
Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Eye protection	:	Wear the following personal protective equipment: Safety goggles
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: Flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	:	Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	gel
Color	:	clear, light blue
Odor	:	fruity
Odor Threshold	:	No data available
pH	:	6.5 - 8.5
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	73 °C

Flash point	:	25 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Density	:	0.881 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, kinematic	:	1,000 - 17,000 mm2/s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Ethanol:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 124.7 mg/l Exposure time: 4 h Test atmosphere: vapor

Propan-2-ol:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 72.6 mg/l Exposure time: 4 h Test atmosphere: vapor
Acute dermal toxicity	:	LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Ingredients:

Ethanol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Propan-2-ol:
Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Ingredients:

Ethanol:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days
Method: OECD Test Guideline 405

Propan-2-ol:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Ingredients:

Ethanol:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

Propan-2-ol:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Ethanol:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: Ingestion
Result: negative

Propan-2-ol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Propan-2-ol:
Species: Rat
Application Route: inhalation (vapor)
Exposure time: 104 weeks
Method: OECD Test Guideline 451
Result: negative

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Ingredients:

Ethanol:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Mouse Application Route: Ingestion Method: OECD Test Guideline 416 Result: negative

Propan-2-ol:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion Result: negative

STOT-single exposure

Not classified based on available information.

Ingredients:

Propan-2-ol:
Assessment: May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

Ethanol:
Species: Rat
NOAEL: 2,400 mg/kg
Application Route: Ingestion
Exposure time: 2 y

Propan-2-ol:
Species: Rat
NOAEL: 5000 ppm
Application Route: inhalation (vapor)
Exposure time: 104 w
Method: OECD Test Guideline 413

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Ethanol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 9.6 mg/l Exposure time: 9 d
Toxicity to bacteria	:	EC50 (Photobacterium phosphoreum): 32.1 mg/l Exposure time: 0.25 h

Propan-2-ol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 10,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 24 h
Toxicity to algae	:	ErC50 (Scenedesmus quadricauda (Green algae)): > 1,800 mg/l

Exposure time: 8 d

Toxicity to bacteria : EC50 (Pseudomonas putida): > 1,050 mg/l
Exposure time: 16 h

Persistence and degradability

Ingredients:

Ethanol:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 84 %
Exposure time: 20 d

Propan-2-ol:
Biodegradability : Result: rapidly degradable

Bioaccumulative potential

Ingredients:

Ethanol:
Partition coefficient: n-octanol/water : log Pow: -0.35

Propan-2-ol:
Partition coefficient: n-octanol/water : log Pow: 0.05

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
UN number : UN 1987
Proper shipping name : ALCOHOLS, N.O.S.

(Ethanol, Propan-2-ol)

Class	:	3
Packing group	:	III
Labels	:	3

IATA-DGR

UN/ID No.	:	UN 1987
Proper shipping name	:	Alcohols, n.o.s. (Ethanol, Propan-2-ol)
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1987
Proper shipping name	:	ALCOHOLS, N.O.S. (Ethanol, Propan-2-ol)
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-D
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 1987
Proper shipping name	:	ALCOHOLS, N.O.S.
Class	:	3
Packing group	:	III
Labels	:	FLAMMABLE LIQUID
ERG Code	:	127
Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Propan-2-ol	67-63-0	3.4086 %

US State Regulations

Pennsylvania Right To Know

Ethanol	64-17-5	50 - 70 %
Water	7732-18-5	30 - 50 %
Propan-2-ol	67-63-0	1 - 5 %

New Jersey Right To Know

Ethanol	64-17-5	50 - 70 %
Water	7732-18-5	30 - 50 %
Propan-2-ol	67-63-0	1 - 5 %

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

REACH : All ingredients (pre-)registered or exempt.

TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

AICS : All ingredients listed or exempt.

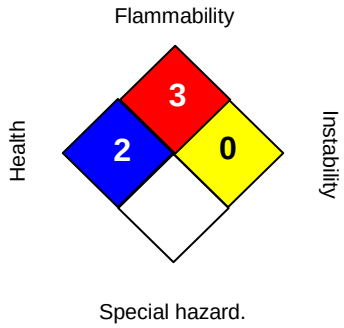
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA	:	8-hour time weighted average
Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	02/10/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

SAFETY DATA SHEET

Lysol Brand Kills 99.9% of Bacteria Neutra Air Sanitizing Spray Rejuvenating Morning Linen Scent
Lysol Brand Kills 99.9% of Bacteria Neutra Air Sanitizing Spray Revitalizing Fresh Breeze Scent
Lysol Brand Kills 99.9% of Bacteria Neutra Air Sanitizing Spray Energizing Citrus Zest Scent

1. Product and company identification

Product name : Lysol Brand Kills 99.9% of Bacteria Neutra Air Sanitizing Spray Rejuvenating Morning Linen Scent
Lysol Brand Kills 99.9% of Bacteria Neutra Air Sanitizing Spray Revitalizing Fresh Breeze Scent
Lysol Brand Kills 99.9% of Bacteria Neutra Air Sanitizing Spray Energizing Citrus Zest Scent

Distributed by : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: : **http://www.rbnainfo.com**

Product use : Air Sanitizer.

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : D0101855 v2.0

Formulation #: : 1589-106 (8073141 v1.0)
1749-032 (8073139 v1.0)
1589-105 (8073138 v1.0)

EPA ID No. : 777-101

UPC Code / Sizes : Tin plated aerosol cans.
Rejuvenating Morning Linen Scent: 19200-79196-0 (10 oz.)
Revitalizing Fresh Breeze Scent: 19200-76938-9 (10 oz.); 19200-78862-5 (16 oz.)
Energizing Citrus Zest Scent: 19200-76940-2 (10 oz.); 19200-80425-7 (16 oz.)

2. Hazards identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Flammable aerosol.
Pressurized container: may burst if heated.

Precautionary statements

General : Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.

Response : Not applicable.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Not applicable.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Ethyl alcohol	15 - 30	64-17-5
2,2'-(ethylenedioxy)diethanol	5 - 10	112-27-6
butane	15 - 30	106-97-8
propane	5 - 10	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

4. First aid measures

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : May cause eye irritation upon direct contact with eyes.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Conditions for safe storage, including any incompatibilities : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
Ethyl alcohol	**ACGIH TLV (United States, 4/2014).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.
butane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 800 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 6/2013).** STEL: 1000 ppm 15 minutes.
propane	**OSHA PEL 1989 (United States, 3/1989).**

8. Exposure controls/personal protection

	TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. Physical and chemical properties

Appearance

Physical state : Liquid. [Aerosol. Liquefied compressed gas.]

Color : Clear.

Odor : Characteristic.

Odor threshold : Not available.

pH : 9.5 to 10.5 [Conc. (% w/w): 100%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: 18.6°C (65.5°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.8667 to 0.8967 g/cm³ [20 to 25°C]

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 20.4 kJ/g

Ignition distance : <45.72 cm

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Keep away from extreme heat. Protect from moisture. Keep from freezing.

Incompatible materials : Do not mix with household chemicals.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethyl alcohol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-
2,2'-(ethylenedioxy)diethanol	LD50 Oral	Rat	15000 mg/kg	-
*Lysol Neutra Air Sanitizing Spray (Aerosol)	LC50 Inhalation Vapor	Rat	>2.45 mg/l	14 days
	LD50 Dermal	Rabbit	>5050 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Not classified Harmful. * Information is based on toxicity test result of the concentrate of a similar product.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethyl alcohol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
2,2'-(ethylenedioxy)diethanol	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
*Lysol Neutra Air Sanitizing Spray (Aerosol)	Eyes - Cornea opacity	Rabbit	0	24 hours 0.1 mL	72 hours
	Skin - Erythema/Eschar	Rabbit	0	4 hours 0.5 mL	72 hours

Conclusion/Summary

Skin : Non-irritant to skin. *Information is based on toxicity test result of the concentrate of a similar product.

Eyes : Mildly irritating to the eyes. *Information is based on toxicity test result of the concentrate of a similar product.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
*Lysol Neutra Air Sanitizing Spray (Aerosol)	skin	In vivo	Not sensitizing

Conclusion/Summary

Skin : Non-sensitizer to skin. * Information is based on toxicity test result of the concentrate of a similar product.

Mutagenicity

Not available.

11. Toxicological information

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethyl alcohol	-	1	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : May cause eye irritation upon direct contact with eyes.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

11. Toxicological information

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Ethyl alcohol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
2,2'-(ethylenedioxy)diethanol	Acute LC50 35000 ul/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 59900000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 7500 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 100 ul/L Marine water	Fish - Cyprinodon variegatus - Egg	28 days

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Ethyl alcohol	-0.35	-	low
2,2'-(ethylenedioxy)diethanol	-1.75	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
TDG Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
Mexico Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IMDG Class	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		See DG List

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: 2-methylpropan-2-ol; 2-(4-tert-butylbenzyl)propionaldehyde; 7-hydroxycitronellal; α-hexylcinnamaldehyde; phenylacetaldehyde

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

15. Regulatory information

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Ethyl alcohol 2,2'-(ethylenedioxy)diethanol	15 - 30 5 - 10	Yes. No.	No. No.	No. No.	Yes. Yes.	No. No.

State regulations

Massachusetts : The following components are listed: BUTANE; PROPANE; ETHYL ALCOHOL

New York : None of the components are listed.

New Jersey : The following components are listed: BUTANE; PROPANE; ETHYL ALCOHOL; ALCOHOL

Pennsylvania : The following components are listed: BUTANE; PROPANE; DENATURED ALCOHOL; ETHANOL, 2,2'-[1,2-ETHANEDIYLBIS(OXY)]BIS-

Label elements

Signal word: : CAUTION

Hazard statements : Do not spray directly in eyes.

Precautionary measures : Keep out of reach of children.
CONTENTS UNDER PRESSURE. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120 °F. Use with adequate ventilation. Do not breathe gas/fumes/vapor/spray. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Hazard statements :

Flammable

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	3
Physical hazards	0
Personal protection	A

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

NFPA (30B) aerosol Flammability Level 1

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Date of issue : 13/05/2015.

Date of previous issue : 10/03/2009.

Version : 2

16. Other information

Prepared by : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

Revision comments : Update as per US GHS.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

RB is a member of the CSPA Product Care Product Stewardship Program.

SAFETY DATA SHEET
MUSTANG® INSECTICIDE

SDS # : 1495-A
Revision date: 2015-04-20
Format: NA
Version 1.02

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name MUSTANG® INSECTICIDE

Other means of identification

Product Code(s) 1495-A

Synonyms FMC 56701; A mixture of the stereoisomers (S)-α-cyano-3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate where the ratio of the (S);(1RS,3RS) isomeric pair to the (S); (1RS,3SR) isomeric pair lies in the ratio range 45–55 to 55–45; (S)-cyano(3-phenoxyphenyl)methyl (±)-cis-trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate

Active Ingredient(s) Zeta-cypermethrin (4s)

Chemical Family Pyrethroid Pesticide

Alternate Commercial Name Mustang 1.5 EW

Recommended use of the chemical and restrictions on use

Recommended Use: Insecticide

Restrictions on Use: Use as recommended by the label

Manufacturer Address

FMC Corporation
1735 Market Street
Philadelphia, PA 19103
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

Medical Emergencies:
1 800 / 331-3148 (PROSAR - U.S.A. & Canada)
1 651 / 632-6793 (PROSAR - All Other Countries - Collect)
For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 3

Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Danger

Hazard Statements
H301 - Toxic if swallowed
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
Precautionary Statements - Response
P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P311 - Call a POISON CENTER or doctor
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P330 - Rinse mouth

Precautionary Statements - Storage
P405 - Store locked up
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
No hazards not otherwise classified were identified.

Other Information
Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Pyrethroid Pesticide.

Chemical name	CAS-No	Weight %
Zeta-cypermethrin	52315-07-8	17.1
Propylene glycol	57-55-6	5-10

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Skin Contact
Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Ingestion
Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting or give anything by mouth to an unconscious person. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed
Central nervous system effects.

Indication of immediate medical attention and special treatment needed, if necessary
This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Foam, Carbon dioxide (CO_2), Dry chemical, Soft stream or water fog only if necessary.

Specific Hazards Arising from the Chemical
Hazardous Combustion Products
Carbon oxides (COx), Hydrogen cyanide, Hydrogen chloride, Chlorine.

Explosion data
Sensitivity to Mechanical Impact
Not sensitive.
Sensitivity to Static Discharge
Not sensitive.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

Other
For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

Environmental Precautions
Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

Methods for Containment
Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up
Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling
Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

Storage Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Keep/store only in original container.

Incompatible products None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Propylene glycol 57-55-6	-	-	TWA: 10 mg/m^3 (aerosol only) TWA: 50 ppm (aerosol and vapor) TWA: 155 mg/m^3 (aerosol and vapor)	-

Appropriate engineering controls

Engineering measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

Eye/Face Protection For dust, splash, mist or spray exposure, wear chemical protective goggles.

Skin and Body Protection Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection Protective gloves

Respiratory Protection For dust, splash, mist or spray exposures wear a filtering facepiece respirator (N95, R95, or P95) which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization).

Hygiene measures Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

General information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers These recommendations apply to the product as supplied

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance White, liquid
Physical State Liquid
Color White
Odor Sharp acrid
Odor threshold No information available
pH 4.4 - 4.5
Melting point/freezing point Not applicable
Boiling Point/Range No information available
Flash point Not applicable

Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Density	8.66 lb/gal
Specific gravity	1.04
Water solubility	Emulsifies
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions

Chemical Stability Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Heat, flames and sparks.

Incompatible materials None known.

Hazardous Decomposition Products Carbon oxides (COx), Hydrogen cyanide, Hydrogen chloride, Chlorine.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral	234 mg/kg (rat)
LD50 Dermal	> 2,000 mg/kg (rabbit)
LC50 Inhalation	> 0.89 mg/L (4-hr) (rat)
Serious eye damage/eye irritation	Mildly irritating (rabbit).
Skin corrosion/irritation	Slightly or non-irritating (rabbit).
Sensitization	Sensitizer

Information on toxicological effects

Symptoms Signs of toxicity in laboratory animals included tremors, tonic - clonic convulsions, loss of muscle control, rales, bloody oral discharge, hypersensitivity to touch and ataxia.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity	Zeta-cypermethrin: Long-term exposure caused neurotoxicity (body tremors, decreased motor activity), decreased body weight and increased liver weight.
Mutagenicity	Zeta-cypermethrin: Not genotoxic in laboratory studies
Carcinogenicity	Cypermethrin caused an increase in benign lung tumors in mice, but not in rats. EPA has classified cypermethrin as a possible human carcinogen based on this information, but does not regulate based on its low cancer risk.

Neurological effects Zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic or chronic exposure.
Reproductive toxicity Zeta-cypermethrin: No toxicity to reproduction in animal studies.
Developmental toxicity Zeta-cypermethrin: Not teratogenic in animal studies.
STOT - single exposure May cause respiratory irritation. See listed target organs below.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure. See listed target organs below.
Target organ effects Zeta-cypermethrin: Central Nervous System (CNS), blood.
Neurological effects Zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic or chronic exposure.
Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Zeta-cypermethrin (52315-07-8)				
Active Ingredient(s)	Duration	Species	Value	Units
Zeta-cypermethrin	48 h EC50	Crustacea	0.14	µg/L
	96 h LC50	Fish	0.69	µg/L
	72 h EC50	Algae	>1	mg/L
	21 d NOEC	Crustacea	0.01	µg/L
	21 d NOEC	Fish	0.015	µg/L

Persistence and degradability Zeta-cypermethrin: Non-persistent. Readily hydrolyzed. Not readily biodegradable.

Bioaccumulation Zeta-cypermethrin: The substance does not have a potential for bioconcentration.

Mobility Zeta-cypermethrin: Immobile, Not expected to reach groundwater.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

Contaminated Packaging Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. TRANSPORT INFORMATION

DOT

UN/ID no UN3352
Proper Shipping Name Pyrethroid pesticide, liquid, toxic
Hazard class 6.1
Packing Group III
Marine Pollutant Zeta-cypermethrin.
Description UN3352, Pyrethroid pesticide, liquid, toxic, 6.1, PG III, Marine Pollutant

TDG The "Marine Pollutant" marking is only applicable when shipped by vessel, and is not applicable when shipped only by road or rail in Canada.

UN/ID no UN3352
Proper Shipping Name Pyrethroid pesticide, liquid, toxic
Hazard class 6.1
Packing Group III
Marine Pollutant Zeta-cypermethrin.

Description	UN3352, Pyrethroid pesticide, liquid, toxic (Zeta-cypermethrin (4s)), 6.1, PG III, Marine Pollutant

ICAO/IATA

UN/ID no	UN3352
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic
Hazard class	6.1
Packing Group	III
Description	UN3352, Pyrethroid pesticide, liquid, toxic (Zeta-cypermethrin (4s)), 6.1, PG III, Marine Pollutant

IMDG/IMO

UN/ID no	UN3352
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic
Hazard class	6.1
Packing Group	III
EmS No.	F-A, S-A
Marine Pollutant	Zeta-cypermethrin
Description	UN3352, Pyrethroid pesticide, liquid, toxic (Zeta-cypermethrin (4s)), 6.1, PG III, Marine Pollutant

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

FIFRA Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING
This pesticide is extremely toxic to fish, aquatic invertebrates, oysters and shrimp.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

International Inventories

Component	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Zeta-cypermethrin 52315-07-8 (17.1)			X		X	X	X	X
Propylene glycol 57-55-6 (5-10)	X	X	X	X	X	X	X	X

Mexico - Grade Moderate risk, Grade 2

WHMIS Hazard Class D1B - Toxic materials
D2B - Toxic materials

16. OTHER INFORMATION

NFPA	**Health Hazards** 2	**Flammability** 1	**Instability** 0	**Special Hazards** -
HMIS	**Health Hazards** 2*	**Flammability** 1	**Physical hazard** 0	**Personal Protection** X

Revision date: 2015-04-20
Revision note (M)SDS sections updated

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Prepared By:

FMC Corporation

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End of Safety Data Sheet

RECKITT BENCKISER

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	**NEUTRA AIR® From the Makers of LYSOL® BRAND PRODUCTS, AIR TREATMENT, ALL SCENTS (AEROSOL)**
Product Description	Eliminates odors in the air caused by germs.
Manufacturer	Reckitt Benckiser Inc. 1655 Valley Road Wayne, N.J. 07474
Product Identifier	Not available.
Item Number	379826
Formula Number	677-132A (F/F 379826) Fresh scent; 677-132B (F/F 379828) Citrus; 677-132C (F/F 379829) Floral scent; 926-038B (F/F 383141) Sparkling Waters.
UPC Number	19200-76938 (10 oz. Aerosol can) Fresh scent; 19200-76940 (10 oz. Aerosol can) Citrus; 19200-76939 (10 oz. Aerosol can) Floral scent; 19200-77360 (10 oz. Aerosol can) Sparkling Waters scent.

MSDS#	Not available.
Validation Date	**10/1/2003**
Print Date	10/7/2003

In case of Emergency:	Telephone: 800-228-4722
Transportation Emergencies:	Chemtrec: 1-800-424-9300 (U.S. & Canada)

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
1) N-BUTANE	106-97-8	16-20	TWA: 1900 (mg/m^3) from ACGIH (TLV) [United States] TWA: 800 (ppm) from ACGIH (TLV) [United States]
2) PROPANE	74-98-6	5-9	TWA: 1000 (ppm) from OSHA (PEL) [United States] TWA: 2500 from ACGIH (TLV) [United States] TWA: 1000 (ppm) from NIOSH (10 Hr. TWA) [United States]

Section 3. Hazards Identification

Emergency Overview

CAUTION: CONTENTS UNDER PRESSURE. May cause eye irritation. Do not spray in eyes. Do not puncture or incinerate container. Do not expose to heat or store at temperature above 120°F (50°C), as container may burst.

KEEP OUT OF REACH OF CHILDREN.

Section 4. First Aid Measures

Eye Contact

In case of eye contact, hold eyes open and IMMEDIATELY rinse eyes thoroughly with plenty of water. Remove any contact lenses and continue rinsing for at least 15 minutes. If irritation occurs, get medical attention.

Skin Contact

In keeping with good hygienic practices, wash exposed areas thoroughly with soap and water.

Inhalation

Remove to fresh air.

NOTE TO PARENTS: Intentional misuse by deliberately concentrating and inhaling aerosol products may be harmful or fatal. Help stop inhalation abuse; for information call 1-800228-4722.

Ingestion

Rinse mouth with water. Contact a physician or poison control center if symptoms develop. NEVER give an unconscious person anything to ingest.

Continued on Next Page

Section 5. Fire and Explosion Data

Flammability	See Section 14 for any Shipping Classifications.
Flash Point	Not applicable. Aerosol flame extension less than 18 inches or 45 cm.
Explosive Limits in Air	Not available.
Products of Combustion	Not available.
Fire and Explosion Hazards	CONTENTS UNDER PRESSURE. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120°F (50°C), as container may burst.
Fire Fighting Media and Instructions	Use water spray, foam, dry chemical or carbon dioxide, as suitable, for the surrounding fire.
Special Fire Fighting Instructions	Move containers away from fire, if possible and safe to do so. Use water spray to cool fire-exposed containers. Provide shielding for venting, rupturing or bursting containers. Wear self-contained breathing apparatus and full protective clothing appropriate for fighting a chemical fire.

Section 6. Accidental Release Measures

Accidental Spill	Small spill of liquid or spray residue: Absorb with an inert material and place in an appropriate waste disposal container. Large spills from ruptured containers: Eliminate all sources of ignition and ventilate the area with equipment rated for use in flammable environments. Collect liquid and store in metal containers for disposal according to local, state or federal regulations.

Section 7. Handling and Storage

Handling and Storage	CAUTION: CONTENTS UNDER PRESSURE. May cause eye irritation. Do not spray in eyes. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120°F (50°C), as container may burst. Store containers in an upright position in a cool, dry place in areas inaccessible to children. KEEP OUT OF REACH OF CHILDREN.

Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	None required under normal use conditions.
Eye Protection	Avoid contact with eyes. Eye irritation may result from direct contact with the spray. Emergency responders should wear full eye and face protection.
Skin Protection	None required. Emergency responders should wear impermeable gloves.
Respiratory Protection	None required.
Other Protection	None normally required. Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
Work/Hygienic Practices	None required. Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

Continued on Next Page

Section 9. Physical and Chemical Properties

Description	Liquid. (Aerosol container.)
pH	Not available.
Boiling/Condensation Point	Not available.
Specific Gravity	1.0 (concentrate)
Vapor Pressure	Not available.
Vapor Density	Not available.
Viscosity	Not available.
Solubility	Miscible in water.
Physical Chemical Comments	Not available.

Odor	677-132A (Fresh), 677-123B (Citrus), 677-132C (Floral), 926-038B (Citrus, apple, jasmin, amber).
Color	Not applicable, colorless spray mist.

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable at normal ambient temperatures.
Conditions of Instability	Temperatures above 120° F (50° C) which may cause aerosol container to rupture.
Incompatibility with Various Substances	None known.
Hazardous Decomposition Products	None known.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Exposure effects

Eye Contact	May cause eye irritation upon direct contact with the eyes.
Skin Contact	None expected.
Inhalation	Avoid prolonged breathing of vapor. Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.
Ingestion	None expected.
Carcinogenicity	Not listed as carcinogenic by OSHA, NTP or IARC.

Continued on Next Page

Section 12. Ecological Information

Ecotoxicity	Not available.

Section 13. Disposal Considerations

Waste Disposal	Discard individual empty container in trash. DO NOT PUNCTURE OR INCINERATE! Large quantity disposal: Degas cans and discharge liquid contents to metal containers for evaluation and final disposal. Accumulate intact cans for transport to shredder, approved incinerator, or other facility in accord with local, state and federal regulations.

Section 14. Transport Information

DOT Classification	Consumer Commodity, ORM-D
Proper Shipping Name	Not applicable.
DOT Identification Number	Not applicable.
Packing Group	Not applicable.
Maritime Transportation	Not applicable.
Hazardous Substances Reportable Quantity	Not applicable.
Special Provisions for Transport	Not applicable.
TDG Classification	Consumer Commodity / Limited Quantity, Transborder Consignment.
ADR Classification	Not applicable.
IMDG Classification	Aerosols, Class 2, UN1950 - Limited Quantity.
IATA Classification	Aerosols, Division 2.2, UN1950 - Limited Quantity.

Section 15. Regulatory Information

Federal and State Regulations	SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting: None California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act: None
Other Classifications	**WHMIS (Canada)** Not controlled under WHMIS (Canada).

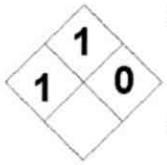
Continued on Next Page

Section 16. Other Information

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	3
Reactivity	0
Personal Protection	B

National Fire Protection Association (U.S.A.)



NFPA Aerosol Level 1, per NFPA 30B

Validated by Product Safety on 10/1/2003.

Printed 10/7/2003.

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

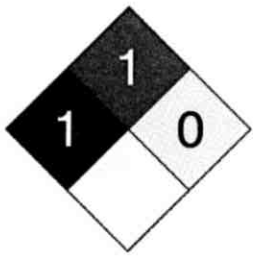
RECKITT BENCKISER

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	**LYSOL® Brand (Kills 99% of Bacteria) Neutra Air® Sanitizing Spray (Aerosol), All Scents**
UPC CODES	Refer to Section 16
CAS #	Mixture
Product use	Fragrance
Distributed by	Reckitt Benckiser Morris Corporate Center IV 399 Interpace Parkway P.O. Box 225 Parsippany, NJ 07054-0225 In Case of Emergency: 1-800-228-4722 Transportation Emergencies: 24 Hour Number: North America: CHEMTREC: 1-800-424-9300 Outside North America: 1-703-527-3887

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



2. Hazards Identification

Emergency overview

This product is regulated by the US EPA as a disinfectant.

PRECAUTIONARY STATEMENTS: Hazards to humans and domestic animals.
CAUTION
DO NOT spray directly in eyes.
PHYSICAL HAZARDS: CONTENTS UNDER PRESSURE.
Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

KEEP OUT OF REACH OF CHILDREN AND PETS.

Potential short term health effects

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	None expected during normal conditions of use. May cause eye irritation upon direct contact with the eyes.
Skin	None expected during normal conditions of use. Not expected to be a skin sensitizer.
Inhalation	Do not breathe spray. Use only in a well ventilated area. NOTE TO PARENTS: Intentional misuse by deliberately concentrating and inhaling aerosol products may be harmful or fatal. Help stop inhalation abuse; for information visit www.inhalant.org.
Ingestion	Contains denatured ethyl alcohol. May be harmful if swallowed.
Target organs	Eyes. Skin. Respiratory system.
Chronic effects	The finished product is not expected to have chronic health effects.
Signs and symptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Propane	74-98-6	2.5 - 10
Triethylene glycol	112-27-6	2.5 - 10
Butane	106-97-8	10 - 20
Ethanol	64-17-5	10 - 20

4. First Aid Measures

First aid procedures

Eye contact — Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact — Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation — Move to fresh air.

Ingestion — Rinse mouth with water. If symptoms persist, call a physician or Poison Control Centre immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Notes to physician — Contains denatured ethanol; ingestion may result in ethanol poisoning. Treat patient symptomatically.

General advice — Do not puncture or incinerate container. Keep away from sources of ignition. No smoking. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

NOTE TO PARENTS: Intentional misuse by deliberately concentrating and inhaling aerosol products may be harmful or fatal. Help stop inhalation abuse; for information visit www.inhalant.org.

5. Fire Fighting Measures

Flammable properties — Flammable Aerosol.

Extinguishing media

Suitable extinguishing media — Treat for surrounding material.

Unsuitable extinguishing media — Not available

Protection of firefighters

Specific hazards arising from the chemical — Contents under pressure. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out.

Protective equipment for firefighters — Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products — May include and are not limited to: Oxides of carbon.

Explosion data

Sensitivity to mechanical impact — Not available

Sensitivity to static discharge — Not available

6. Accidental Release Measures

Personal precautions — Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods for containment — Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up	Small spillages of up to 1 litre (0.26 gallon) may be cleaned up with a mop or an absorbant cloth. Medium spills of up to 5 litres (1.32 gallons) should be absorbed with sand, earth, sawdust or other inert material and transferred to a suitable container for disposal.

7. Handling and Storage

Handling	Use this product with adequate ventilation. When using do not eat or drink. Do not puncture or incinerate container. Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C (120°F). Do not pierce or burn after use. Keep away from all sources of ignition. Fires involving aerosols with flammable contents are severe and can spread quickly. Warehouses or stores containing aerosols should therefore be separated from other areas by a fire resistant construction. Stores should be well ventilated. The natural ventilation in a large open warehouse building will normally be suitable. Does not harm most bathroom surfaces. Do not use on polished wood, painted surfaces, leather, rayon fabrics, or acrylic plastics.
Storage	Keep out of reach of children. Do not store at temperatures above 49 °C (120.2°F). Keep away from heat, open flames or other sources of ignition. NOTE TO PARENTS: Intentional misuse by deliberately concentrating and inhaling aerosol products may be harmful or fatal. Help stop inhalation abuse; for information visit www.inhalant.org.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Butane	**ACGIH-TLV** TWA: 1000 ppm **OSHA-PEL** Not established
Ethanol	**ACGIH-TLV** TWA: 1000 ppm STEL: 1000 ppm **OSHA-PEL** TWA: 1000 ppm
Propane	**ACGIH-TLV** TWA: 1000 ppm **OSHA-PEL** TWA: 1000 ppm
Triethylene glycol	**ACGIH-TLV** Not established **OSHA-PEL** Not established

Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye / face protection	If splashes are likely to occur, wear: Safety glasses Emergency responders should wear full eye and face protection.
Hand protection	No special requirements under normal use conditions. Protective gloves are recommended for prolonged or repeated exposure. Emergency responders should wear impermeable gloves.
Skin and body protection	Usual safety precautions while handling the product will provide adequate protection against injury or irritation. Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.

Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Emergency responders should wear self-contained breathing apparatus (SCBA) to avoid inhalation of vapours generated by this product during a spill or other clean-up operations.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact. Avoid contact with skin, eyes and clothing.

9. Physical and Chemical Properties

Appearance	Aerosol.
Color	Clear
Form	Misty spray
Odor	Characteristic
Odor threshold	Not available
Physical state	Gas
pH	9.5 - 10.5
Freezing point	Not available
Pour point	Not available
Boiling point	Not available
Flash point	> 82.76 °F (> 28.2 °C) (Concentrate)
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	0.9685
Octanol/water coefficient	Not available
Solubility (H2O)	Complete
Auto-ignition temperature	Not available

10. Stability and Reactivity

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Protect from sunlight and do not expose to temperatures exceeding 50°C (120°F). Extremes of temperatures can occur in cars and near ovens and fireplaces. Do not place in contact with hot surfaces or near naked flames. Do not pierce or burn after use. Do not spray on a naked flame, onto or near a fire, or any incandescent material such as an electric fire.
Incompatible materials	Caustics. Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Butane	Not available
Ethanol	31623 ppm rat
Propane	Not available
Triethylene glycol	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Butane	Not available
Ethanol	3450 mg/kg mouse; 7060 mg/kg rat
Propane	Not available
Triethylene glycol	7900 mg/kg guinea pig; 12800 mg/kg rat; 8400 mg/kg rabbit; 21000 mg/kg mouse

Effects of acute exposure

Eye None expected during normal conditions of use.
May cause eye irritation upon direct contact with the eyes.

Skin None expected during normal conditions of use.
Not expected to be a skin sensitizer.

Inhalation Do not breathe spray. Use only in a well ventilated area.

NOTE TO PARENTS: Intentional misuse by deliberately concentrating and inhaling aerosol products may be harmful or fatal. Help stop inhalation abuse; for information visit www.inhalant.org.

Ingestion Contains denatured ethyl alcohol. May be harmful if swallowed.

Sensitization May cause allergic reactions in some individuals.

Chronic effects The finished product is not expected to have chronic health effects.

Carcinogenicity The finished product is not expected to have chronic health effects.

ACGIH - Threshold Limit Values - Carcinogens

Ethanol	64-17-5	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC - Group 1 (Carcinogenic to Humans)

Ethanol	64-17-5	Monograph 96 [in preparation] (in alcoholic beverages)

Mutagenicity The finished product is not expected to have chronic health effects.

Reproductive effects The finished product is not expected to have chronic health effects.

Teratogenicity The finished product is not expected to have chronic health effects.

Synergistic Materials Not available

12. Ecological Information

Ecotoxicity Bulk quantities, if spilled, may be toxic to aquatic organisms, fish, birds and mammals. Control and clean up all exterior spills and prevent liquid from entering any streams, rivers, lakes and all other bodies of water.

Ecotoxicity - Freshwater Fish Species Data

Ethanol	64-17-5	96 Hr LC50 Oncorhynchus mykiss: 12.0-16.0 ml/L [static]; 96 Hr LC50 Pimephales promelas: >100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 13400-15100 mg/L [flow-through]
Triethylene glycol	112-27-6	96 Hr LC50 Pimephales promelas: 56200-63700 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 10000 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 61000 mg/L [flow-through]

Ecotoxicity - Water Flea Data

Ethanol	64-17-5	48 Hr LC50 Daphnia magna: 9268 - 14221 mg/L; 24 Hr EC50 Daphnia magna: 10800 mg/L; 48 Hr EC50 Daphnia magna: 2 mg/L [Static]
Triethylene glycol	112-27-6	48 Hr EC50 Daphnia magna: 42426 mg/L

Environmental effects Not available

Aquatic toxicity May be harmful to aquatic organisms if bulk quantities are spilled into a water source.

Persistence / degradability Not available

Bioaccumulation / accumulation Not available

Partition coefficient Not available

Mobility in environmental media Not available

Chemical fate information Not available

13. Disposal Considerations

Waste codes Not available

Disposal instructions	Dispose in accordance with all applicable regulations. Container disposal: Empty containers may be included with domestic refuse for disposal to a landfill. This container may also be recycled in communities where aerosol container recycling is available. Before offering for recycling, empty the can or use the product according to the label instructions.
Waste from residues / unused products	Not available
Contaminated packaging	Packaging and container to be recycled only if emptied completely.

14. Transport Information

U.S. Department of Transportation (DOT)

UN1950, Aerosols, Class 2.1, Re-Classed as
Consumer Commodity ORM-D

Transportation of Dangerous Goods (TDG - Canada)

UN1950, Aerosols, Flammable, Class 2.1, Re-Classed
as Consumer Commodity

IMDG (Marine Transport)

UN1950 - Aerosols, Class 2.1, Limited Quantity

IATA/ICAO (Air)

UN1950 - Aerosols, Flammable, Limited Quantity or Consumer Commodity, ID8000 if acceptable to airline

15. Regulatory Information

US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

EPA Registration No. - 777-101

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
Clean Air Act (CAA)	Not available
Clean Water Act (CWA)	Not available

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Butane	106-97-8	Present

U.S. - Massachusetts - Right To Know List

Butane	106-97-8	Present
Ethanol	64-17-5	Teratogen
Propane	74-98-6	Present

U.S. - Minnesota - Hazardous Substance List

Butane	106-97-8	Present
Ethanol	64-17-5	Present
Propane	74-98-6	Simple asphyxiant

U.S. - New Jersey - Right to Know Hazardous Substance List

Butane	106-97-8	sn 0273
Ethanol	64-17-5	sn 0844
Propane	74-98-6	sn 1594

U.S. - Pennsylvania - RTK (Right to Know) List

Butane	106-97-8	Present
Ethanol	64-17-5	Present
Propane	74-98-6	Present
Triethylene glycol	112-27-6	Present

U.S. - Rhode Island - Hazardous Substance List

Butane	106-97-8	Toxic; Flammable
Ethanol	64-17-5	Toxic; Flammable
Propane	74-98-6	Toxic; Flammable
Triethylene glycol	112-27-6	Flammable

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

This product should only be used as directed on the label and for the purpose intended. To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Further information

19200-76940-2 - LYSOL® Brand (Kills 99.9% of Bacteria) Neutral Air® Sanitizing Spray (Aerosol), All Scents - 10 oz. - Citrus - 0161387

19200-76938-9 - LYSOL® Brand (Kills 99.9% of Bacteria) Neutral Air® Sanitizing Spray (Aerosol), All Scents - 10 oz. - Fresh - 0161386

19200-78862-5 - LYSOL® Brand (Kills 99.9% of Bacteria) Neutral Air® Sanitizing Spray (Aerosol), All Scents - 16 oz. - Fresh - 0161386

19200-79196-0 - LYSOL® Brand (Kills 99.9% of Bacteria) Neutral Air® Sanitizing Spray (Aerosol), All Scents - 10 oz. - Morning Linen - 0176212

Issue date 08-Jul-2010

Effective date 15-May-2010

Prepared by Reckitt Benckiser Regulatory Department 800-333-3899

Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

MATERIAL SAFETY DATA SHEET

Transammonia Inc.
4211 W. Boy Scout Blvd., Suite 600
Tampa, Florida 33607
Phone: 813/261-0600
Fax: 813/261-0601

24-Hour Emergency Telephone
CHEMTREC - 1-800-424-9300

PRODUCT NAME: AMMONIUM NITRATE, FERTILIZER GRADE 34-0-0

PRODUCT IDENTIFICATION

Common Name: Nitrate
Chemical Name: Ammonium Nitrate
Chemical Formula: NH4NO3
Cas # 6484-52-2
Chemical Family: Inorganic Nitrate

HAZARDOUS COMPONENTS

INGREDIENTS	PERCENTAGES	PEL/OSHA	TLV (ACGIH)	HAZARD INDEX
AMMONIUM NITRATE	99	15 mg/m3: nuisance dust 5 mg/m3: respirable dust	Health - 1 Flammability - 0 Reactivity - 3	

PHYSICAL DATA

Boiling Point: Decomposes @ 410 deg F.
Vapor Pressure: < 1 MM Hg @ 100 deg F.
Vapor Density (Air=1.0): Data not available
Evaporation Rate (Ether=1.0): Data not available (very low)
Specific Gravity (H20 = 1.0): 1.725
Percent Volatiles: <1%
Soluble in Water: Yes ☒ No ☐
Appearance & Odor: Odorless white to brown to pink granules or prills.

FIRE AND EXPLOSION DATA

Flash Point: Not Applicable. Auto Ignition Temp: Not Applicable. Flammable limits in air (% by Volume): Lower / Upper: Not applicable

Extinguishing Media: Fires involving the product are Class A. Ventilate and use flooding amounts of water to cool the burning material below decomposition temperature. DO NOT USE CARBON DIOXIDE (CO_2), DRY CHEMICAL OR FOAM EXTINGUISHERS.

Special Fire Fighting Procedures: Ammonium Nitrate does not burn by itself, but at temperatures above 410 deg. F it decomposes, giving off oxygen to support combustion of organic material. Spontaneous ignition at moderately elevated temperatures can occur when ammonium nitrate is mixed with oxidizable materials such as organic chemicals, polymers and oxidizable finely divided metals. If confined and ignition occurs, an explosion may occur. Use large quantities of water only. Smothering agents are ineffective. Consideration must be given to chance contamination of ammonium nitrate with oil, charcoal or other combustible and sensitizing substances, with possible explosion of the entire mass. Because of this potential, the surrounding areas should be evacuated.

Unusual Fire and Explosion Hazards: Ammonium Nitrate decomposed by fire gives off toxic fumes; approach from upwind wearing self-contained breathing apparatus. Explosive decomposition may result if mixed with organic fuel. Do not let pressure or temperature build up in containers of this product. EVACUATE THE AREA.

HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

ACUTE - Intense cyanosis, nausea, vertigo, vomiting, collapse, spasm of abdominal pain, tachycardia (rapid heart beat), tachypnea (rapid breathing), coma, convulsions, and death can occur. Inhalation of excessive dust could irritate the lungs.
CHRONIC - Not expected to be a problem.
BODY PARTS - Irritation of skin and eyes. Prolonged contact with the skin will produce mild irritation and possibly some blistering.

HEALTH HAZARD DATA - CONTINUED

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory conditions from possible dust inhalation.

IS MATERIAL A CARCINOGEN OR POTENTIAL CARCINOGEN? Yes ☐ No ☒

EMERGENCY AND FIRST AID PROCEDURES:

Skin or eye contact - Flush with water
Ingestion - Seek medical assistance promptly. Induce vomiting to empty stomach of ingested material. Give 2 glasses of water and stick finger down the throat. Do not give fluids or induce vomiting to an unconscious person. Keep patient prone and warm.
Lethal dose - approximately 10-15 g, in man

The two basic effects of nitrate ingestion are the relaxation of smooth muscle, especially in small blood vessels, leading to collapse and shock; and in toxic doses, the conversion of nitrate to nitrite occurs. Nitrite initiates the conversion of hemoglobin to methemoglobin resulting in chemical cyanosis commonly described at "huckleberry" in hue. Most toxic cases occur with infants and are less likely with adults. In adults, ammonium nitrate will induce diuresis (increased flow of urine).

REACTIVITY

STABLE: Yes ☒ No ☐ CONDITIONS TO AVOID: Avoid heat, flame and confinement. Temperatures above 410 deg. F will cause decomposition.

INCOMPATIBILITY (MATERIALS TO AVOID): Organic, combustible or reactive materials (i.e., do not mix with combustible materials, sulfur, metal, finely subdivided lead, zinc, galvanized iron, acids, flammable liquids, charcoal, coke and cork).

HAZARDOUS DECOMPOSITION PRODUCTS: Ammonia, nitrous oxide and oxygen.

HAZARDOUS POLYMERIZATION: Yes ☐ No ☒ Conditions to avoid: N/A

SPILL OR LEAK PROCEDURES

STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED: Keep spills uncontaminated. Damp or caked material may be scooped or swept into containers. Balance of spill may be washed down with water. Spills contaminated with water will form a solution. All solutions are to be kept out of drinking water, sewage system, and waterways.

WASTE DISPOSAL PROCEDURES: May be spread on cropland as fertilizer. Otherwise, use landfill or other appropriate method that complies with Federal, State, and Local regulations. Note: Ammonium nitrate is a salt which will damage or "burn" plant foliage when directly applied to it. Heavy concentrations will kill plants. Therefore, it is necessary to water thoroughly.

PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY EQUIPMENT: National Institute for Occupational Safety and Health approved dust respirator is recommended. In fire fighting, wear a self-contained breathing apparatus with full face mask.

EYE PROTECTION: Safety glasses with side shields must be worn.
PROTECTIVE CLOTHING: Cloth or rubber gloves.
VENTILATION REQUIREMENTS: Ventilate only for temporary dust removal.
OTHER (Safety Showers, Eyewash Stations, etc.): Generally not required.

SPECIAL PRECAUTIONS AND COMMENTS

HANDLING AND STORING: Store in clean, dry room away from explosives, organic, combustible or reactive materials. Do not mix or contaminate with organic fuel.

OTHER: A.D.O.T. yellow OXIDIZING AGENT LABEL is required for shipping. In bulk, a placard with UN 2067 displayed is required. Health hazard index of 1.0 is assigned only because of possible dust exposure.

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE BUT TRANSAMMONIA DOES NOT WARRANT, EXPRESS OR IMPLIED, THE FITNESS OF CONTENTS HEREOF FOR EITHER GENERAL OR PARTICULAR PURPOSES. IN NO EVENT SHALL TRANSAMMONIA BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES NOR SHALL ANYONE HAVE A RIGHT OR REMEDY BASED ON OR RELATED TO POSSESSION AND/OR USE OF THIS DATA SHEET.

SANCHEM INC.

1600 South Canal Street
Chicago, IL 60616

Phone: 312-733-6100
Fax: 312-733-7432

Date: 6-19-12

Company: HD Supply

Attn: DAVID LITTLETON

Address: _____

_____

City, State, Zip: _____

Phone: 407-893-9118

Fax: 407-893-7382

PRODUCT	SAMPLE	PRICE	LITERATURE	MSDS
NO-OK-1D "A SPECIAL"				X

MATERIAL SAFETY DATA SHEET

HMIS RATING: H-0 F-0 R-I

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **NO-OX-ID "A SPECIAL"**

COMPANY IDENTIFICATION: SANCHEM, INC.
1600 S. CANAL STREET
CHICAGO IL 60616

TEL: 312-733-6100
CHEMTREC: 800-424-9300

SIGNATURE OF PREPARER:
(Optional)

DATE: 05/18/2010

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

	OSHA PEL	ACGIH TLV	CAS#		%
Mineral Spirits Rule 66	500	100	8052-41-3	350mg/cu*	8%

Shipping Not Regulated

*NIOSH Recommendations for an 8 Hour Exposure to 100% Mineral Spirits – Rule 66

According to current US Dept of Labor Standards, this Material Contains NO Toxic or Hazardous Chemicals

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	450°F	Specific Gravity (H_2O = 1):	.86
Vapor Pressure (mm Hg.):	N/A	Melting Point:	135°F - 165°F
Vapor Density (AIR = 1):	N/A	Evaporation Rate: (Butyl Acetate = 1):	N/A
Solubility in Water:	Insoluble		
Appearance and Odor:	Light to Dark Brown Grease		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used):	250°F 120°C C.O.C.
Flammable Limits:	LEL 0.9 UEL 6.0
Extinguishing Media:	Dry Chemical, Sand or Foam
Special Fire Fighting Procedures:	Recommend Supplied Air Respirator
Unusual Fire and Explosion Hazards:	Water May Cause Frothing which May Cause Splattering of Hot Material

SECTION V - REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Open Flame or Excessive Heat Strong Oxidizing Materials
Incompatibility (Materials to Avoid):	Strong Oxidizers
Hazardous Decomposition or Byproducts	Carbon Dioxide, Carbon Monoxide or Hydrocarbons
Hazardous Polymerization:	Will Not Occur

SECTION VI - HEALTH HAZARD DATA

Routes of Entry:	Inhalation:	N/A
	Skin:	Yes
	Indigestion:	Yes
Health Hazards (Acute and Chronic):	N/A:	
Carcinogenicity:	NTP?	No
	IARC Monographs?	No
	OSHA Regulated?	No
Signs and Symptoms of Exposure:	May Cause Minor Skin Irritation	
Medical Conditions Generally Aggravated by Exposure:	None Known	
Emergency and First Aid Procedures:	Skin:	Wash with Soap and Water
	Ingestion:	Induce Vomiting
	Eyes:	Wash & Irrigate with Saline Sol.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Released or Spilled:	Scoop up an Store in Sealed Steel Drums for Disposal. Wash Area Down with Soap and Water.
Waste Disposal Method:	Normal Scavenger
Storage and Handling:	Store in Cool Dry Area away from Open Flames, Heat or Sparks
Other Precautions:	None

SECTION VIII - CONTROL MEASURES

Respiratory Protection:	Not Required
Ventilation:	Not Required
Protective Gloves:	Optional
Eye Protection:	Goggles
Protective Clothing or Equipment:	Not Required
Work/Hygienic Practices:	Wash Hands Before Eating

SECTION IX - DISCLAIMER

The information in this MSDS was obtained from current and reputable sources. The data is provided without any warranty, express or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for product usage and to assume liability for loss, injury, damage or expense resulting from improper use.

Material Name: OATEY PVC REGULAR CLEAR – LO-VOC FORMULA

* * * Section 1 - Product and Company Identification * * *

MSDS #1100E

Part Numbers: Clear - 31012, 31013, 31014, 31015, 31016, 31958, 31959, 31960, 31961

Manufacturer Information

Oatey Co.
4700 West 160th Street
Cleveland, OH 44135

Phone: 216-267-7100

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1- 703-527-3887.

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquids - Category 2
Acute Toxicity Oral - Category 4
Acute Toxicity Dermal - Category 4
Acute Toxicity Inhalation - Category 4
Eye Damage/Irritation - Category 2A
Carcinogenicity - Category 2
Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.
Causes serious eye irritation.
Contains a chemical classified by the US EPA as a suspected possible carcinogen.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames and hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/gas/mist/vapors.
Use only outdoors or in a well-ventilated area.

Response

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
If exposed or concerned Get medical advice/attention.
In case of fire: Use dry chemical, CO2, or foam to extinguish fire.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
109-99-9	Tetrahydrofuran	20-40
78-93-3	Methyl ethyl ketone	15-35
108-94-1	Cyclohexanone	10-20
67-64-1	Acetone	10-20
9002-86-2	PVC (Chloroethylene, polymer)	10-18

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

First Aid: Skin

Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Combustion Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Extinguishing Media

Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Stop leak if it can be done without risk.

Materials and Methods for Clean-Up

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Environmental Precautions

Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. Other: "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Tetrahydrofuran (109-99-9)

ACGIH: 50 ppm TWA
100 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 200 ppm TWA; 590 mg/m3 TWA
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
250 ppm STEL; 735 mg/m3 STEL

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m3 TWA
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA: 1000 ppm TWA; 2400 mg/m3 TWA
NIOSH: 250 ppm TWA; 590 mg/m3 TWA

Cyclohexanone (108-94-1)

ACGIH: 20 ppm TWA
50 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 50 ppm TWA; 200 mg/m3 TWA
NIOSH: 25 ppm TWA; 100 mg/m3 TWA
Potential for dermal absorption

PVC (Chloroethylene, polymer) (9002-86-2)

ACGIH: 1 mg/m3 TWA (respirable fraction)

Engineering Measures

Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory

For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands

Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Clear	**Odor:**	Ether-like
Physical State:	Liquid	**pH:**	NA
Vapor Pressure:	145 mmHg @ 20°C	**Vapor Density:**	2.5
Boiling Point:	151°F (66°C)	**Melting Point:**	NA
Solubility (H2O):	Negligible	**Specific Gravity:**	0.90 +/- 0.02 @ 20°C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0	**VOC:**	84-88%
Octanol/H2O Coeff.:	ND	**Flash Point:**	14-23°F (-10 to -5°C)
Flash Point Method:	CCCFP	**Upper Flammability Limit (UFL):**	11.8
Lower Flammability Limit (LFL):	1.8	**Burning Rate:**	ND
Auto Ignition:	ND		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Decomposition Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

Component Analysis - LD50/LC50

Tetrahydrofuran (109-99-9)
Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

Methyl ethyl ketone (78-93-3)
Inhalation LC50 Mouse 32 g/m3 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Acetone (67-64-1)
Oral LD50 Rat 5800 mg/kg

Cyclohexanone (108-94-1)
Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Carcinogenicity

A: General Product Information

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

B: Component Carcinogenicity

Tetrahydrofuran (109-99-9)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Cyclohexanone (108-94-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

PVC (Chloroethylene, polymer) (9002-86-2)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Reproductive Toxicity

Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Specified Target Organ General Toxicity: Single Exposure

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

This product is not expected to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Tetrahydrofuran (109-99-9)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	1970-2360 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	2700-3600 mg/L [static]	
24 Hr EC50 Daphnia magna	5930 mg/L	

Methyl ethyl ketone (78-93-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	3130-3320 mg/L [flow-through]	
48 Hr EC50 Daphnia magna	>520 mg/L	
48 Hr EC50 Daphnia magna	5091 mg/L	
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L [Static]	

Acetone (67-64-1)

Test & Species		Conditions
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]	
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L	

Cyclohexanone (108-94-1)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	481-578 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	8.9 mg/L	
96 Hr EC50 Chlorella vulgaris	20 mg/L	
24 Hr EC50 Daphnia magna	800 mg/L	

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information

For Greater than 1 liter (0.3 gal):
Shipping Name: Adhesives
UN #: 1133 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):
Shipping Name: Consumer Commodity, ORM-D

IMDG Information

For Greater than 1 liter (0.3 gal):
Shipping Name: Adhesives
UN #: 1133 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):
Shipping Name: Adhesives
UN #: 1133 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): None (Limited Quantities are expected from labeling)

* * * Section 15 - Regulatory Information * * *

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Tetrahydrofuran (109-99-9)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Acetone (67-64-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Cyclohexanone (108-94-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	Yes	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	No
PVC (Chloroethylene, polymer)	9002-86-2	No	No	No	Yes	No	No

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Tetrahydrofuran	109-99-9	1 %
Methyl ethyl ketone	78-93-3	1 %
Acetone	67-64-1	1 %
Cyclohexanone	108-94-1	0.1 %

Additional Regulatory Information

A: General Product Information

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Tetrahydrofuran	109-99-9	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
Acetone	67-64-1	Yes	DSL	EINECS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
PVC (Chloroethylene, polymer)	9002-86-2	Yes	DSL	ELINCS

* * * Section 16 - Other Information * * *

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:
NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:
The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

End of Sheet

MATERIAL SAFETY DATA SHEET

MSDS Number: 1104E

Section 1 PRODUCT AND COMPANY IDENTIFICATION

Trade Name:	OATEY PVC RAIN-R-SHINE BLUE CEMENT
Product Nos.:	30890, 30891, 30893, 30894, 30895, 30896, 31954, 31955, 31956, 31957
Product Use:	Cement for PVC Plastic Pipe
Formula:	PVC Resin in Solvent Solution
Synonyms:	PVC Plastic Pipe Cement
Firm Name & Address:	Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135 www.oatey.com
Firm Phone No:	(216) 267-7100
Emergency Phone Nos.:	For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared by:	Technical Department
Preparation Date:	10/01/2009

Section 2 HAZARDS IDENTIFICATION

Emergency Overview:

Blue liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:	%wt/wt :	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA	OTHER:
Tetrahydrofuran	30 - 60%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	10 – 30%	78-93-3	200 ppm 300 ppm	200 ppm	None
Acetone	10 - 30%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
PVC Resin (Non-hazardous)	12 – 20%	9002-86-2	10 mg/m3	15 mg/m3	None
Cyclohexanone	7 – 13%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None
Amorphous Fumed Silica (Non-hazardous)	1 - 5%	112945-52-5	10 mg/m3	None Established	None a

OSHA Hazard Classification: Flammable, irritant, organ effects

Section 4 FIRST AID MEASURES

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

Eyes:	If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.
Inhalation:	If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion:	**DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

Section 5 FIRE FIGHTING MEASURES

Flashpoint / Method:	14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP
Flammability:	LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media:	Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire And Explosion Hazards:	Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

Section 7 HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other:	"Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Respiratory Protection:	For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection:	Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.
Eye Protection:	Safety glasses with side shields or safety goggles.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	Not applicable
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	80-84%
Solubility In Water:	Negligible
pH:	Not applicable
Specific Gravity:	0.94 +/- 0.02 @ 20 Degrees C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Blue Liquid
Odor:	Ether-Like
Will Dissolve In:	Tetrahydrofuran
Material Is:	Liquid

Section 10 STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid:	Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization:	Will not occur.

Section 11 TOXICOLOGICAL INFORMATION

Inhalation:	Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin:	May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.
Toxicity Data:	Acetone: Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours

	Cyclohexanone:	Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg
	Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours
	Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg
Sensitization:	None of the components are known to cause sensitization.	
Carcinogenicity:	None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as “A3,” Confirmed Animal Carcinogens with Unknown Relevance to Humans.	
Mutagenicity:	Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.	
Reproductive Toxicity:	Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.	
Medical Conditions Aggravated By Exposure:	Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.	

Section 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information:	This product emits VOC’s (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level:	Maximum 510 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal:	Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number:	U002, U057, U159, U213
EPA Hazardous Waste ID Number:	D001, D035, F003, F0005
EPA Hazard Waste Number:	Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

Section 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3 gal)	Greater than 1 Liter (0.3 gal)
UN/NA Number:	None	UN1133
Proper Shipping Name:	Consumer Commodity	Adhesives

Hazard Class:	ORM-D	3
Packing Group:	None	PGII
Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1133	UN1133
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emercency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Section 311/312:	Acute Health, Chronic Health, Flammable
Section 302 Extremely Hazardous Substances (TPQ):	This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals:	This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.
CERCLA 103 Reportable Quantity:	Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (60% maximum) of 1,000 lbs, is 1,667 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65:	This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California “No Significant Risk Level” (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.
TSCA Inventory	All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Classification:	Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16 OTHER INFORMATION

NFPA and HMIS:	
NFPA Hazard Signal:	Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal:	Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:
The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Template: tmpl-us-e1

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200

OFF!® DEEP WOODS® TOWELETTES (REG. NO. 27895 P.C.P. ACT)

Version *1*.

Print Date 11/02/2009

Revision Date 09/01/2009

MSDS Number 350000003834
SITE_FORM Number
30000000000000003169.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name	:	OFF!® DEEP WOODS® TOWELETTES (REG. NO. 27895 P.C.P. ACT)
Use of the Substance/Mixture	:	Insect Repellent
Company	:	S.C. Johnson and Son, Limited 1 Webster Street Brantford ON N3T 5R1
Emergency telephone	:	24 Hour Transport & Medical Emergency Phone (866) 231-5406 24 Hour International Emergency Phone (952) 852-4647 24 Hour Canadian Transport Emergency Phone (CANUTEC) (613) 996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor	:	clear to white / Liquid absorbed by inert carrier material / solvent
Immediate Concerns	:	Warning CAUSES EYE IRRITATION. FLAMMABLE: May be harmful if swallowed. Avoid contact with eyes and lips. Keep away from heat, sparks and flame.

Potential Health Effects

Exposure routes	:	Eye, Skin, Inhalation, Ingestion.
Eyes	:	May cause: Moderate eye irritation
Skin	:	May cause skin reactions in rare cases.
Inhalation	:	None known.
Ingestion	:	May be harmful if swallowed. May cause irritation to mouth, throat and stomach.
Aggravated Medical Condition	:	None known.

OFF!® DEEP WOODS® TOWELETTES (REG. NO. 27895 P.C.P. ACT)

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight percent
Ethyl alcohol	64-17-5	30.00 - 60.00
N,N-Diethyl-m-toluamide	134-62-3	25.00
Polypropylene	9003-07-0	10.00 - 30.00

4. FIRST AID MEASURES

Eye contact : Flush immediately with plenty of water for at least 15 to 20 minutes. Get medical attention if irritation develops and persists.

Skin contact : Wash off with soap and water. Get medical attention if irritation develops and persists.

Inhalation : If breathing is affected, get medical attention. Remove to fresh air.

Ingestion : Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Alcohol foam, carbon dioxide, dry chemical, water fog

Specific hazards during fire fighting : Material may burn in heat of fire.

Further information : Wear full protective clothing and positive pressure self-contained breathing apparatus. Cool and use caution when approaching or handling fire-exposed containers.

Flash point : 81 - 82 °F
Method: Tag Closed Cup (TCC)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Remove all sources of ignition.

Environmental precautions : Use appropriate containment to avoid environmental contamination.

Methods for cleaning up : Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling

Advice on safe handling : Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.
Avoid contact with eyes and lips.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers : Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Basis
Ethyl alcohol	64-17-5	-	1,000 ppm	ACGIH TWA

Personal protective equipment

Respiratory protection

Industrial setting : Substantial amounts of mist/vapors can be controlled with local exhaust ventilation or respiratory protection.

Household setting : No personal respiratory protective equipment normally required.

Hand protection

Industrial setting : For prolonged or repeated contact use protective gloves.

Household setting : not required under normal use

Eye protection

Industrial setting : No special requirements.

Household setting : No special requirements.

Hygiene measures	:	Use only with adequate ventilation. Wash thoroughly after handling. Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid absorbed by inert carrier material
Color	:	clear to white
Odor	:	solvent
pH	:	no data available
Boiling point	:	no data available
Freezing point	:	no data available
Flash point	:	81 - 82 °F Method: Tag Closed Cup (TCC)
Evaporation rate	:	no data available
Autoignition temperature	:	no data available
Vapour pressure	:	no data available
Water solubility	:	slightly soluble
Partition coefficient: n-octanol/water	:	no data available

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	Do not mix with oxidizing agents.
Hazardous decomposition products	:	When exposed to fire, produces normal products of combustion.
Hazardous reactions	:	Stable

OFF!® DEEP WOODS® TOWELETTES (REG. NO. 27895 P.C.P. ACT)

Version *1*.
Revision Date 09/01/2009

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MSDS Number 350000003834
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30000000000000003169.001

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	2,329 mg/kg
Acute inhalation toxicity	:	> 2.25 mg/l
Acute dermal toxicity	:	> 5,000 mg/kg

Chronic effects

Carcinogenicity	:	no data available
Mutagenicity	:	no data available
Reproductive effects	:	no data available
Teratogenicity	:	no data available
Sensitisation	:	May cause sensitization by skin contact.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects	:	no data available

13. DISPOSAL CONSIDERATIONS

Industrial setting	:	Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Household setting	:	Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**

UN-Number	None.
Proper shipping name	not regulated

Class:	4.1
Packaging group:	II
Note:	SC Johnson ships this product as Consumer Commodity ORM-D (non-bulk packages)

Sea transport

- *IMDG:*

Class:	4.1
Packaging group:	II
Proper shipping name	not regulated
UN-Number:	None.
Note:	SC Johnson ships this product as "Limited Quantity" when the container quantity value is 1 Kilogram or less.

Air transport

- *ICAO/IATA:*

Class:	4.1
Packaging group:	II
Proper shipping name	not regulated
UN/ID No.:	
Note:	SC Johnson typically does not ship products via air, therefore it has not been determined if the product container meets current IATA/ICAO package criteria. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status	:	All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Notification status	:	All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).
California Prop. 65	:	This product is not subject to the reporting requirements under California's Proposition 65.
	:	This product has been classified in accordance with hazard

criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health	2
Flammability	3
Reactivity	0

NFPA Ratings

Health	2
Fire	3
Reactivity	0
Special	

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

RECKITT BENCKISER

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	**OLD ENGLISH® FURNITURE POLISH, ALL SCENTS (AEROSOL)**
Product Description	Old English® Brand Furniture Polish in a variety of scents which offers superior protection of wood finishes compared to dusting spray products.
Manufacturer	Reckitt Benckiser North America, Inc. Morris Corporate Center IV 399 Interpace Parkway (P.O. Box 225) Parsippany, N.J. 07054-0225
Product Identifier	Not available.
Item Number	360228
Formula Number	360228 (Country Scent®), 367445 (Orchard Fruits™), 890743 (Lemon)
UPC Number	62338-74034 (12.5 oz.) Orchard Fruits™, 62338-74035 (12.5 oz.) Lemon, 62338-74637 (12.5 oz.) Country Scent

MSDS#	Not Available
Validation Date	**8/5/2004**
Print Date	8/5/2004

In case of Emergency:	Telephone: 800-228-4722
Transportation Emergencies:	Chemtrec: 1-800-424-9300 (U.S. & Canada) Outside the U.S & Canada (North America), call: 703-527-3887

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
1) HYDROTREATED HEAVY NAPTHA (PETROLEUM)	64742-48-9	10-20	TWA: 300 (ppm) from ACGIH (TLV) TWA: 1350 (mg/m^3)
2) ISOBUTANE	75-28-5	1-5	TWA: 1900 (mg/m^3) from ACGIH (TLV) TWA: 800 (ppm) from ACGIH (TLV)
3) PROPANE	74-98-6	1-5	TWA: 1000 (ppm) from OSHA (PEL) TWA: 2500 (ppm) from ACGIH (TLV) TWA: 1800 (mg/m^3) from OSHA TWA: 1000 (ppm) from OSHA

Section 3. Hazards Identification

Emergency Overview

CAUTION: Contents under pressure. May cause eye irritation. Avoid eye contact. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120°F. Do not spray or use on floors as it may leave them slippery. KEEP OUT OF REACH OF CHILDREN.

Section 4. First Aid Measures

Eye Contact	In case of eye contact, immediately rinse eyes thoroughly with plenty of water. Remove any contact lenses and continue rinsing for at least 15 minutes. If irritation persists, consult a physician.
Skin Contact	In keeping with good hygienic practices, wash exposed areas thoroughly with soap and water.
Inhalation	Inhalation exposure is not anticipated under recommended use conditions. Remove to fresh air.
Ingestion	DO NOT induce vomiting. Contact a physician or poison control center immediately.

Continued on Next Page

Section 5. Fire and Explosion Data

Flammability	See Section 14 for any Shipping Classifications.
Flash Point	Not applicable. Aerosol flame extension less than 18 inches or 45 cm.
Explosive Limits in Air	Not available.
Products of Combustion	Not available.
Fire and Explosion Hazards	CONTENTS UNDER PRESSURE. Do not use or store near heat or open flame. Do not puncture or incinerate. Exposure to temperatures above 120°F (48.8°C) may cause bursting.
Fire Fighting Media and Instructions	Use water spray, foam, dry chemical or carbon dioxide, as suitable, for the surrounding fire. Use water spray to cool fire-exposed containers.
Special Fire Fighting Instructions	Wear self-contained breathing apparatus and protective clothing appropriate for fighting a chemical fire. Move containers away from fire, if possible and safe to do so. Provide shielding for venting, rupturing or bursting containers.

Section 6. Accidental Release Measures

Accidental Spill	Small spills: Soak up spills with an absorbent material and place in an appropriate container designed for flammable waste for disposal. Wash surface residue in spill area well and dry surface to avoid slippery conditions. Large spills: Eliminate all sources of ignition and ventilate the area with equipment rated for use in flammable environments. Liquid spills from ruptured containers should be contained, collected and stored in metal containers designed for flammable waste for later disposal according to local, state or federal regulations.

Section 7. Handling and Storage

Handling and Storage	CAUTION: Contents under pressure. May cause eye irritation. Avoid eye contact. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120°F (48.8° C). Store in an area inaccessable to children and pets. Do not spray or use on floors as it may leave them slippery. KEEP OUT OF REACH OF CHILDREN.

Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	None normally required.
Eye Protection	None required under normal use conditions. When handling in large quantities or responding to emergency situations, the use of appropriate eye protection is recommended.
Skin Protection	None required.
Respiratory Protection	None required.
Other Protection	None required.
Work/Hygienic Practices	Washing with soap and water after use is recommended as good hygienic practice to prevent possible skin irritation and/or eye irritation from hand contact.

Continued on Next Page

Section 9. Physical and Chemical Properties

Description	Aerosol container. White to light tan foam when sprayed.
pH	7 [Neutral.]
Boiling/Condensation Point	0.93 @ 25°C (product concentrate).
Specific Gravity	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Viscosity	Not available.
Solubility	Dispersable.
Physical Chemical Comments	Not available.

Odor	Lemon, Fragrance like (Country Scent®) or Potpourri.
Color	Light tan cream. Opaque. (Light.)

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	Do not expose to heat or store at temperatures above 120°F (48.8°C).
Incompatibility with Various Substances	None known.
Hazardous Decomposition Products	None known.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Exposure effects

Eye Contact	Avoid contact with eyes. May cause eye irritation.
Skin Contact	None expected.
Inhalation	None expected.
Ingestion	None expected under recommended use conditions. Liquid phase of this product may present an aspiration hazard if ingested.
Carcinogenicity	Not listed as carcinogenic by OSHA, NTP or IARC.

Section 12. Ecological Information

Ecotoxicity	Not available.

Continued on Next Page

Section 13. Disposal Considerations

Waste Disposal	Do not puncture or incinerate container. Discard individual empty container in trash. Large quantity disposal: Degas cans and discharge liquid contents into an appropriate metal container. Accumulate intact cans for transport to shredder, approved incinerator, or other facility in accord with local, state and federal regulations.

Section 14. Transport Information

DOT Classification	ORM-D
Proper Shipping Name	Consumer Commodity.
DOT Identification Number	Not applicable.
Packing Group	Not applicable.
Maritime Transportation	Not applicable.
Hazardous Substances Reportable Quantity	Not applicable.
Special Provisions for Transport	ORM-D: For US Domestic Shipments Only.
TDG Classification	Consumer Commodity - Transborder Consignment
ADR Classification	Not applicable.
IMDG Classification	Aerosols, class 2.2 UN1950 - LTD. QTY.
IATA Classification	Consumer Commodity, 9 ID8000.

Section 15. Regulatory Information

Federal and State Regulations

SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting:

None

California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act:

None

Other Classifications

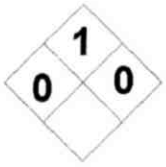
WHMIS (Canada) Not controlled under WHMIS (Canada).

Section 16. Other Information

HMIS (U.S.A.)

Health Hazard	0
Fire Hazard	1
Reactivity	0
Personal Protection	a

National Fire Protection Association (U.S.A.)



NFPA Aerosol Level 1, per NFPA 30B

Continued on Next Page

Validated by Product Safety on 8/5/2004.

Printed 8/5/2004.

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

AC 41772

2520-57

The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product:	ORANGE ENERGY™ PINE-SOL® ALL PURPOSE CLEANER	
Description:	CLEAR ORANGE LIQUID WITH CITRUS ORANGE ODOR	
Other Designations	**Distributor**	**Emergency Telephone Nos.**
	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call 1-800-446-1014 For Transportation Emergencies, call Chemtrec 1-800-424-9300

II Health Hazard Data

Eye irritant. May cause skin irritation.

No medical conditions are known to be aggravated by exposure to this product.

FIRST AID:

EYE CONTACT: Immediately rinse with plenty of water. If irritation persists, call a doctor.

INGESTION: Drink a glassful of water. Call a doctor or poison control center.

SKIN CONTACT: Rinse with plenty of water. If irritation persists, call a doctor.

INHALATION: Remove to fresh air. If breathing problems develop, call a doctor.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Alkyl alcohol ethoxylates CAS # 66455-15-0	5 - 10%	Not established.
Monoethanolamine CAS #141-43-5	1 - 5%	3 ppm - TLV-TWA[a] 3 ppm - PEL[b] 6 ppm - TLV-STEL[c]

[a]TLV-TWA = ACGIH Threshold Limit Value - Time Weighted Average

[b]PEL = OSHA Permissible Exposure Limit - Time Weighted Average

[c]TLV-STEL = ACGIH Threshold Limit Value - Short Term Exposure Limit

None of the materials in this product are on the IARC, OSHA, or NTP carcinogen lists.

IV Special Protection and Precautions

Hygienic Practices: Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods.

Engineering Controls: Use local exhaust to minimize exposure to product mist.

Personal Protective Equipment: Wear safety glasses. Wear rubber or neoprene gloves if there is the potential for repeated or prolonged skin contact. In situations where exposure limits may be exceeded, a NIOSH-approved respirator is advised.

V Transportation and Regulatory Data

DOT/IATA/IMDG: Not restricted.

EPA - SARA Title III/CERCLA: This product is regulated under Sections 311/312. This product contains no chemicals which are regulated under Section 313 and contains ethylenediaminetetraacetic acid (CAS #60-00-4, <1%) and glycol ethers (<1%) which are regulated under Section 304/CERCLA.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Flash Point: >200°F (closed cup)

Fire Extinguishing Agents: Dry chemical, carbon dioxide (CO_2), foam, or water spray.

IX Physical Data

pH	~10.5
Specific gravity	~1.0
Solubility in water	Soluble

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DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH

DATE PREPARED 5/02

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** March 15, 2018 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Original Pine-Sol® Squirt 'N Mop Multi-Surface Floor Cleaner**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Ready-to-use floor cleaner

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
The Clorox Company
1221 Broadway
Oakland, CA 94612

Phone: 1-510-271-7000

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Label elements, including precautionary statements

Emergency Overview

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Appearance Clear, yellow **Physical State** Thin liquid **Odor** Pine

Precautionary Statements - Prevention
None

Precautionary Statements - Response
None

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
0.2% of the mixture consists of ingredient(s) of unknown toxicity

Other information
No information available

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product contains no substances that at their given concentrations are considered to be hazardous to health.

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Hold eye open and rinse slowly and gently with water for 15–20 minutes. If present, remove contact lenses after the first 5 minutes of rinsing, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Skin Contact Rinse skin with plenty of water. If irritation persists, call a doctor.

Inhalation Move to fresh air. If breathing problems develop, call a doctor.

Ingestion Drink a glassful of water. Call a doctor or poison control center.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects May cause slight eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

Hazardous Combustion Products
Oxides of carbon.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed.

Incompatible Products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product does not contain any ingredients with occupational exposure limits that are at concentrations below their cut-off values/concentrations and that contribute to the hazard classification of the product.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required.

Skin and Body Protection No special protective equipment required.

Respiratory Protection No protective equipment is needed under normal use conditions. If irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Thin liquid		
Appearance	Clear	**Odor**	Pine
Color	Yellow	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	3 - 4	None known
Melting/freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.0	None known
Water Solubility	Complete	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None known.

Conditions to avoid
None known.

Incompatible materials
None known.

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information .

Inhalation Exposure to vapor or mist may irritate respiratory tract.

Eye Contact May cause slight irritation.

Skin Contact May cause slight irritation.

Ingestion Ingestion may cause slight irritation to mucous membranes and gastrointestinal tract.

Information on toxicological effects

Symptoms May cause slight redness and tearing of eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredients listed as a carcinogen.

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic Toxicity No known effect based on information supplied.
Target Organ Effects None known.

Aspiration Hazard Not an aspiration hazard.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
No information available.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all applicable federal, state, and local regulations.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT Not regulated.

TDG Not regulated.

ICAO Not regulated.

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Chemical Inventories

TSCA All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.
DSL/NDSL All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances known to be subject to state right-to-know regulations.

International Regulations

Canada
WHMIS Hazard Class
Not controlled.

16. OTHER INFORMATION

NFPA	**Health Hazard** 0	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 0	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** -

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Preparation/Revision Date	March 15, 2018
Revision Note	Updated date
Reference	1118307/186544.001

General Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Safety Data Sheet

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Document Group:	06-4861-8	**Version Number:**	11.00
Issue Date:	03/19/14	**Supercedes Date:**	03/21/13

SECTION 1: Identification

1.1. Product identifier
P55/R Lubricant, Red

Product Identification Numbers

ID Number	UPC	ID Number	UPC
78-8096-4318-8		78-8126-9891-4	
80-6116-0479-6			

1.2. Recommended use and restrictions on use

Recommended use
Electrical, ELECTRICAL LUBRICATING GREASE

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

Precautionary Statements

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
1,1,2,3,3,3-HEXAFLUORO-1-PROPENE, OXIDIZED, POLYMD.	69991-67-9	95 - 98
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	112945-52-5	<= 5
C.I. PIGMENT RED 170	2786-76-7	<= 0.05

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you are concerned, get medical advice.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbonyl Fluoride	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Fluoride	During Combustion

Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
No unusual fire or explosion hazards are anticipated. When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ventilate the area with fresh air.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial or professional use only. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard.

7.2. Conditions for safe storage including any incompatibilities
Store away from acids. Store away from strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Paste
Odor, Color, Grade:	ODORLESS, RED COLOR,GREASE
Odor threshold	*Not Applicable*
pH	*Not Applicable*
Melting point	*Not Applicable*
Boiling Point	270 ºC [*Details:* MITS data (per supplier info)]
Flash Point	Flash point > 93 °C (200 °F)
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	<=0.01 mmHg
Vapor Density	*No Data Available*
Density	*No Data Available*
Specific Gravity	Approximately 1.99 Units not avail. or not appl. [*Ref Std:* WATER=1]
Solubility in Water	Nil
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*No Data Available*
Decomposition temperature	*Not Applicable*
Viscosity	*No Data Available*
Average particle size	*No Data Available*
Bulk density	*No Data Available*
Hazardous Air Pollutants	*No Data Available*
Molecular weight	*No Data Available*
Volatile Organic Compounds	*No Data Available*
Percent volatile	0.00 %
Softening point	*No Data Available*
VOC Less H2O & Exempt Solvents	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Not determined

10.5. Incompatible materials
Strong acids
Strong bases
Reactive metals

No Data Available

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
No health effects are expected.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
No health effects are expected.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value

Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Dermal	Rabbit	LD50 > 5,000 mg/kg
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Human and animal	Not sensitizing

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SYNTHETIC AMORPHOUS SILICA,	Inhalation	respiratory system | silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

FUMED, CRYSTALLINE FREE						

Aspiration Hazard

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit **http://3M.com/Transportinfo** or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification

and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 0 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group:	06-4861-8	**Version Number:**	11.00
Issue Date:	03/19/14	**Supercedes Date:**	03/21/13

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Material Safety Data Sheet

Revision Date: 03/29/2006

Section I. Product and Company Information

Emergency Contact: Chem*Tel (800) 255-3924

Product Name: **PA ACCENT #1243**

Shipping Description: LIQUID HAND SOAP (Not Regulated)

Sold by: Theochem Laboratories Inc
7373 Rowlett Park Drive
Tampa, FL 33610-1141

NFPA Ratings:		HMIS Ratings:	
Health:	0 - Minimal	**Health:**	0 - Minimal
Fire:	0 - Minimal	**Fire:**	0 - Minimal
Reactivity:	0 - Minimal	**Reactivity:**	0 - Minimal

Section II. Hazardous Ingredients

Name	CAS #	% By Weight	OSHA PEL	ACGIH TLV	Other Limits
NONE					

**Indicates hazardous ingredients which are toxic chemicals subject to the reporting requirements of section 3013 of the emergency planning and community right-to-know act of 1986 and of 40 CFR 32*

Section III: Physical/Chemical Characteristics

Boiling Point:	212°F	Specific Gravity (Water = 1):	1.01
Vapor Pressure (mm.HG):	SAME AS WATER	Melting Point:	N/A
Vapor Density (Air = 1):	SAME AS WATER	Evaporation Rate (BuAc = I):	SAME AS WATER
Solubility In Water:	COMPLETE	pH of Concentrate:	8.8 – 9.8
Appearance and Odor:	SLIGHTLY VISCOUS PINK LIQUID WITH CHERRY ODOR.		

Section IV: Fire and Explosion Hazard Data

Flash Point (method used):	NONE		
Flammable Limits:	N/A		
LEL:	N/A	UEL:	N/A
Extinguishing Media:	NONE		
Special Firefighting Procedures:	NONE		
Unusual Fire & Explosion Hazards:	NONE		

Section V: Reactivity Data

Product Is:	STABLE
Conditions To Avoid:	N/A
Incompatibility (materials to avoid):	AVOID STRONG OXIDIZERS
Hazardous Decomposition or Byproducts:	ON INCINERATION, ANY RESIDUE WILL PRODUCE OXIDES OF CARBON.
Hazardous Polymerization:	WILL NOT OCCUR

Section VI: Health Hazard Data

Route(s) Of Entry:

Inhalation:	NO
Skin:	NO
Ingestion:	UNLIKELY
Health Hazards (Acute & Chronic):	DIRECT CONTACT WITH EYES CAUSES IRRITATION.
Carcinogencity:	NTP: NO
ARC Mongraphs:	NO
OSHA Regulated:	NO
Signs & Symptoms Of Exposure:	EYE IRRITATION.

Medical Conditions Generally Aggravated by Exposure: NONE KNOWN

Emergency and First Aid Procedures

Skin Contact:
N/A THIS PRODUCT IS A HAND SOAP.

Eye Contact:
FLUSH WITH PLENTY OF WATER FOR 15 MIN. IF IRRITATION PERSISTS, SEE A PHYSICIAN.

Ingestion:
DRINK PLENTY OF WATER. DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION.

Inhalation:
N/A

Section VII: Precautions For Safe Handling And Use

Spill Steps:
ABSORB SPILLS ON ABSORBENT MATERIAL SUCH AS PAPER OR SAWDUST. TRANSFER TO CONTAINERS FOR DISPOSAL.

Waste Disposal Method:
LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

Storage & Handling:
STORE IN A COOL, DRY AREA. KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF REACH OF CHILDREN.

Section VIII: Control Measures

Respiratory Protection:	NONE REQUIRED FOR NORMAL PRODUCT USE.
Ventilation: Local Exhaust:	ADEQUATE
Special:	N/A
Mechanical:	N/A
Other:	N/A
Protective Gloves:	N/A
Eye Protection:	GLASSES OR GOGGLES
Other Protective Equip/clothing:	NONE REQUIRED
Work/hygienic Practices:	KEEP CONTAINER CLOSED WHEN NOT IN USE.

We believe the information given is accurate. It is offered in good faith, but without guarantee. Since conditions are beyond our control, user assumes all responsibility and risk.

Fox Valley Systems, Inc.
640 Industrial Dr.
Cary, IL 60013

Section 1 – Product Identification

Trade Name:	Super Stripe Athletic Paint White Super Supreme Traffic Paint Unleaded Yellow Super Stripe Traffic Paint White Blue Unleaded Red Gray Unleaded Yellow Green
Product Name:	Traffic Paint, Athletic Paint
Product Purpose:	Line/Stripe Marking
MFG. Code ID:	SSAW3R, SSAW3D TCW2R, TCW2D TGY2R. TGY2D TBE2R, TBE2D TGN2R, TGN2D TYU2R, TYU2D STYU2R, STYU2D TRU2R, TRU2D
Appearance:	Aerosol dispensing a paint. Color dependant upon grade. Characteristic Odor.
Date Prepared:	January 1st, 2007
UPDATED	February 28, 2007
Emergency Telephone:	Call local poison control center
Information Telephone:	(847) 639-5744

Section 2 – Hazardous Ingredients

Ingredients:	CAS NO.	% By Weight	TWA(ppm)	STEL(ppm)
Acetone	67-64-1	1-5	750	1000
2-Butoxyethanol	111-76-2	1-5	25*	NE
Butane	106-97-8	1-5	800	NE
Isobutane	75-28-5	15-20	NE	NE
Propane	74-98-6	5-15	1000	NE
Toluene (a)	108-88-3	10-20	100	150
VM & P Naphtha	64742-89-8	5-15	300	400
Xylene	1330-20-7	8-15	100	150
Ethylbenzene	100-41-4	2-3	100	125

Note: Ethylbenzene is considered possibly carcinogenic to humans by IARC (Group 2B) based on laboratory animal studies.

(a) Warning: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

- Can be absorbed through the skin

NE = Not Established

Time Weighted Average (TWA) – The employee's average airborne exposure in any 8-hour work shift of a 40-hour workweek, which shall not be exceeded.

Short Term Exposure Limit (STEL) – The employee's 15-minute time weighted average exposure, which shall not be exceeded at any time during a workday.

Parts Per Million (PPM) – PPM is defined as the mass of the component in solution divided by the total mass of the solution multiplied by 10 to the 6th degree.

Section 3 – Physical Characteristics

Evaporation Rate: Slower than ether

Vapor Density: Heavier than air

Percent Volatile by Volume: 70

Weight Per Gallon: 10-10.6 lbs

Boiling Range: N/A

Vapor Pressure: N/A

Specific Gravity: N/A

Melting Point: N/A

Section 4 – Fire and Explosion Hazard Data

Flammability Classification: Product Extremely Flammable

Level 2 Aerosol – NFPA 30B

Flash Point: -20F

Flammable Limits: LEL 1.9 UEL 8.5

Auto Ignition Temperature: N/A

Extinguishing Media: Foam, Carbon Dioxide and Dry Chemical

Special Fire Fighting Procedures: Full protective equipment using self-breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure build-up and possible explosion when exposed to extreme heat.

Unusual Fire and Explosion Hazards: Spray mist of vapors from can per 400 cubic feet of air may reach lower explosive limit and could be ignited by a flame or spark.

NFPA Rating

Type of Paint	Health	Flammability	Reactivity
Unleaded	2	4	0

HMIS Rating

Type of Paint	Health	Flammability	Reactivity	Personal Protection
Unleaded	2	4	0	B

Key: 0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard
B = Safety Glasses and Gloves

Section 5 – Health Hazard Data

Effects of Overexposure

Eyes: May cause irritation, redness, tearing, blurred vision and conjunctivitis.

Skin: Prolonged or repeated contact may cause moderate irritation. De-fatting dermatitis and absorption through the skin in toxic amounts.

Breathing: Excessive inhalation of vapors may cause headaches, nausea, drowsiness, irritation of mucous membrane of nose and throat, respiratory irritation and also allergic reaction.

Ingestion: May cause nausea.

Emergency and First Aid Procedures

In eyes: Flush with water for 15 minutes. Lifting upper and lower lids occasionally, obtain medical attention.

On skin: Wash contaminated area thoroughly with soap and water. Apply a moisturizing hand cream.

If breathed: If affected, remove individual to fresh air. If breathing is difficult, administer oxygen only if trained. If breathing has stopped, give artificial respiration, preferably mouth-to-mouth. Keep person warm, quiet and obtain medical attention.

If swallowed: Only induce vomiting at the instruction of a physician. Keep person warm, quiet and obtain medical attention.

Other: When using this product, do not eat, drink, or smoke.

Note: Following any first aid, medical advice should be obtained. Especially if symptoms persist.

Threshold Value Limit: See Section [2]

Section 6 – Reactivity Data

Stability: Stable

Conditions to Avoid: Heat, sparks and fire.

Materials to Avoid: Strong oxidizing agents. Alkali and alkaline earth metals such as sodium, potassium and barium. Fine powders of light metals and their alloys such as magnesium.

Hazardous decomposition or byproducts: Thermal decomposition may yield CO, CO2.

Hazardous Polymerization: Will not occur.

Section 7 – Spill or Leak Procedures

Steps to be taken if material is released or spilled: Remove all sources of ignition. Ventilate area. Wipe up with inert material. Do not flush into drains. Remove residue with a suitable solvent cleaner immediately.

Waste Disposal Method: Dispose in accordance with federal, state and local laws. Do not pierce or burn can, even after use.

Section 8 – Protective Equipment to be Used

Respiratory protection: Not normally needed if local exhaust is satisfactory. If ventilation is inadequate, use respiratory mask approved by NIOSH/MESA for protection against spray mist.

Ventilation: Requirements vary with rate of product use. Supplement ventilation to keep below OSHA and ACGIH permissible levels of each ingredient.

Protective Gloves: Not Mandatory.

Eye protection: Recommended.

Section 9 – Precautions to be Taken in Handling and Storing

Contents under pressure. Exposure to high temperatures may cause bursting. Avoid storing near radiator, stove, open flame or direct sunlight. Do not incinerate or puncture can.

Do not spray into flames or any incandescent material. Do not smoke while using this product or where solvent vapors are present.

DOL Storage Category: Do not store at temperatures above 120F.

Section 313 – Supplier Notification

These product contain the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

CAS#	Chemical Name	% Weight Upper Bound Concentration
67-64-1	Acetone	5
108-88-3	Toluene	20
1330-20-7	Xylene	15
100-41-14	Ethylbenzene	3

This information should be included in all MSDS that are copied and distributed for this product.

This data sheet is not part of any contract of sale. The information contained herein is believed to be correct or is obtained from sources believed to be generally reliable. However, it is the responsibility of the user of these materials to investigate. Understand and comply with law and with procedures applicable to the safe handling and use of these materials. Fox valley System, Inc. shall not be liable for any loss or damage directly or indirectly arising from the use of the product, and Fox Valley Systems, Inc. assumes no liability for the reliance on the information contained herein, or omission here from.

PRODUCT NAME: 21-XXXX TRICLAD AEROSOLS - ALL COLORS **HMIS CODES: H F R P**
FORMULA KEY: 21-XXXX AEROSOLS **2 3 0 I**

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Fasse Paint Company, Inc.
ADDRESS : 215 Pine Street
: Sheboygan Falls, WI 53085

EMERGENCY PHONE : 1-800-535-5053 **DATE PRINTED : 1/14/2010**
INFORMATION PHONE : 1-920-467-7850 **NAME OF PREPARER : Jim Fasse**

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP		WEIGHT PERCENT
ACETONE	67-64-1	181.7	20 C	39.65
OSHA PEL: 750 PPM				
ACGIH TLV: 500 PPM				
PROPANE	74-98-6	110	70 F	12.70
OSHA PEL: 1000 PPM				
ACGIH TLV: 1000 PPM				
* XYLOL	1330-20-7	8	68 DEG F	10.05
OSHA PEL/TWA IS 100PPM				
ACGIH TLV/TWA IS 100 PPM				
ACGIH TLV/STEL IS 100 PPM				
NORMAL BUTANE	106-97-8	17	70 F	6.00
OSHA PEL: 800 PPM				
ACGIH TLV: 800 PPM				
1-METHOXY 2-PROPYL ACETATE	108-65-6	4.9	20 DEG C	4.05
ACGIH (THV) : NOT ESTABLISHED				
ONTARIO : 50 PPM TWA				
## BLACK	1333-86-4	3	68 F	2.60
BLACK PIGMENT IS A SOLID NOT A LIQUID.				
OSHA PEL 3.5mg/m3				
ACGIH TLV 3.5mg/m3				
MINERAL SPIRITS	8052-41-3	5	100 F	2.30
OSHA PEL: 100 PPM				
ACGIH TLV: 100 PPM				
* EB ETHYLENE GLYCOL BUTYL ETHER	111-76-2	88	25 DEG C	1.45
OSHA PEL: 50 PPM HAP's - NO				
ACGIH: 20PPM				
GLYCOL ETHER PM	107-98-2	88	25 DEG C	.70
OSHA PEL: 50 PPM				
* ## ETHYL BENZENE	100-41-4	7.1	20 DEG C	.40
OSHA PEL: 100 PPM				
ACGIH TLV: 125 PPM				

>>>>>>>>>>>>>>>> AEROSOL CAN <<<<<<<<<<<<<<

This Aerosol Product should not be stored above 120° F. Do Not puncture. Keep from sparks and open flame. Containers may explode when exposed to extreme heat. Do Not apply to hot surfaces.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: -43 F - 355 F **WEIGHT PER GALLON: 6.4 lb/gl**

VAPOR DENSITY: HEAVIER THAN AIR **EVAPORATION RATE: SLOWER THAN ETHER**

COATING V.O.C.: 3.888 lb/gl **MATERIAL V.O.C.: 2.409 lb/gl**
(WITHOUT EXEMPT SOLVENTS) (WITH EXEMPT SOLVENTS)

APPEARANCE AND ODOR:
Viscous liquid with an odor characteristic of the solvents listed in Section II.

========== SECTION IV - FIRE AND EXPLOSION HAZARD DATA ==========

FLASH POINT: -156 F **METHOD USED:**
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: .8 **UPPER: 13.1**

EXTINGUISHING MEDIA:
Use National Fire Protection Association (NFPA) Class B extinguisher (CarbonDioxide, dry, chemical, or universal aqueous film forming foam) designed to extinquish NFPA Flammable liquid fires.

SPECIAL FIREFIGHTING PROCEDURES:
Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferrable. Fire-fighters should wear self contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Keep container tightly closed. Isolate from heat, electrical equipment, sparks, and open flames. Closed containers may explode when exposed to extreme heat. Do not apply on hot surfaces. Do not weld on or near container. Toxic gases may form when product is contacted by flame or hot surfaces.

========== SECTION V - REACTIVITY DATA ==========

STABILITY:
Stable at normal temperatures.

CONDITIONS TO AVOID:
Do not allow the can to exceed 120° F.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
May produce hazardous decomposition products when heated. Welding, brazing, or flame-cutting on surfaces coated with this product may produce fumes including: Carbon Monoxide or Carbon Dioxide.

HAZARDOUS POLYMERIZATION:
Not expected to occur.

========== SECTION VI - HEALTH HAZARD DATA ==========

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Vapor and spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately inhaling the contents can be harmful or fatal.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Eye contact: causes eye irritation. May experience itching, burning sensation and visual disturbances.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
May cause moderate skin irritation. May be harmful if absorbed through the skin. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Harmful or fatal if swallowed.

HEALTH HAZARDS (ACUTE AND CHRONIC):
Avoid long term and repeated contact.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Not applicable.

EMERGENCY AND FIRST AID PROCEDURES:
INGESTION: If swallowed, do not induce vomiting. EYES: In case of eye contact, flush eyes immediately with plenty of water for at least 15 minutes. SKIN: In case of skin contact, remove promptly by wiping, followed by waterless hand cleaner and soap and water. INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other supportive measures as required. Get medical attention.

========== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE ==========

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Provide maximum ventilation. Only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sawdust, vermiculite, or other absorbent material and place into containers for disposal.

WASTE DISPOSAL METHOD:
Waste material must be disposed of in accordance with Federal, State, and Local environmental control regulations. Empty containers should be recycled or disposed of through an approved Waste Management Facility.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Do not store above 120 deg. F. Store large quantities in buildings designed and protected for storage of NFPA Flammable liquids.

OTHER PRECAUTIONS:
If this material is part of a multiple component coating system, read the MSDS for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inchs. Containers of this material may be hazardous when emptied since they retain residues. Do not cut, puncture, or weld on or near container.

========== SECTION VIII - CONTROL MEASURES ==========

RESPIRATORY PROTECTION:
Overexposure to vapors may be prevented by ensuring ventilation controls, vapor exhaust or fresh air entry. If TLV of any component is exceeded, use an appropriate NIOSH/MSHA approved respirator. Follow respirator manufacturers directions for respirator use.

VENTILATION:
Provide sufficient mechanical and/or local exhaust ventilation to keep the concentration of ingredients listed in Section II below the lowest exposure limits.

PROTECTIVE GLOVES:
Impermeable chemical handling gloves for skin protection.

EYE PROTECTION:
Use chemical safety glasses, goggles, and faceshields for eye protection.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Use impermeable aprons and protective clothing whenever possible to prevent skin contact. The use of head caps whenever possible is strongly recommended. Clean or discard contaminated clothing and shoes.

WORK/HYGIENIC PRACTICES:
Eye washes and safety showers in the workplace are recommended.

========== SECTION IX - TRANSPORTATION INFORMATION ==========

PROPER SHIPPING NAME HAZARD CLASS UN NUMBER PACKING GROUP

CONSUMER COMMODITY	ORM-D	DOES NOT APPLY	DOES NOT APPLY

SECTION X - DISCLAIMER

The information and recommendations contained herein are believed to be accurate at the time of preparation or obtained from sources believed to be generally reliable. Fasse Paint Co. will not be held liable for claims relating to any party's use of or reliance on information contained herein, regardless of whether it is claimed the information is inaccurate.

Electromark

Material Specifications

Pan-L-Bond®	4oz, 10.5oz	Rev. June 14, 2010

1. **Scope:**

   1.1 This material standard specifies requirements for Pan-L-Bond® adhesive. Typical uses include but are not limited to bonding Electromark aluminum panels, copolymer panels, and pavement markers to surfaces where mechanical fasteners are not an option or are not desired.

   1.2 Pan-L-Bond® is intended for indoor or outdoor use.

   1.3 This material specification is an evolving document.

2. **Pan-L-Bond® Description:**

   2.1 Pan-L-Bond® is a solvent-based, construction grade, mastic type adhesive that is tan in color and dispenses from a tube as a medium viscosity, non-running bead. Pan-L-Bond® is recommended for bonding high stress construction applications including lumber, brick, concrete, ceramics, and fiberglass. Pan-L-Bond® provides excellent water resistance and provides a firm, stiff, yet permanently flexible bond. Pan-L-Bond® is available from Electromark in 4oz squeeze tubes and 10.5oz caulking tubes.

   2.2 Typical properties of Pan-L-Bond®:

Type	Synthetic Elastomeric Polymer
Solids by Weight	65%
Viscosity	130,000 cps
Solvents	Ketone, Aliphatic, Aromatic
Flash Point	Less than 0°F
Open (working) Time	30 minutes @ 70°F, 50% RH
Set Time	24-48 hours
Ultimate Bond Cure Time	14-28 days @ 77°F
Application Temperature	0°F - 100°F
Service Temperature	-20°F - 120°F
Calculated VOC	282g/l
Shelf Life (unopened container)	1 year from date of manufacture @ 60°F - 80°F

   2.3 Features, Benefits, and Limitations:

   - Excellent gap filling properties lend towards very rough surface applications.
   - Extremely versatile. Bonds most common building materials.
   - Freeze-thaw stable. Can be applied in all weather conditions.
   - Water and weather proof.
   - Exceeds performance specs of APA-AFG-01, FHA Bulletin UM-60, ASTM D3498, and ASTM C557.
   - Not designed for continuous submersion.
   - Cannot be used on expanded foam polystyrene.

3. **Application:** Pan-L-Bond® is applied as a continuous bead to the surface of the material to be fixtured. The bead should be applied in a zigzag pattern line(s) to the backs of panels or in a spiraling circular pattern to the backs of curb markers. The panel or marker is to be

Electromark, 6188 West Port Bay Rd., Wolcott, NY 14590 (315) 594-8085 (315) 594-9622 fax

pressed firmly into place so as to cause the adhesive to spread out on the back of the panel/marker and fill any gaps or surface irregularities on the application surface. The bead should be applied close enough to the outside edge of the panel or marker so as to just slightly squeeze out and form a gap-free seal all the way around the entire perimeter. Application surfaces should be wire brushed free of loose particles and free of contamination from dirt, excessive dust, oil, or grease. It is recommended that panels or markers placed in vertical applications or are subject to gravity or other movement be braced or fixtured overnight until the adhesive has had ample time to set. Surfaces and applications for which this adhesive is not specified should be tested prior to application, and the user accepts responsibility to determine suitability. Unused adhesive remaining in the tube may be capped and used at a later time, but once opened may become hard in the tube and should be used within a relatively short period. If the adhesive does not appear to flow well or becomes noticeably thickened or difficult to dispense after it has been opened, it should be properly disposed of.

4. **Clean Up:** Immediately clean any adhesive from unwanted areas with mineral spirits or paint thinner.

5. **Warranty:** This product is warranted to bond suitably for recommended applications where the product is used within its limited shelf life and properly applied as specified. Electromark's warranty obligation is limited to credit or replacement of the product (at supplier's option). Our product is sold without any warranty of merchantability and without any warranty that our product is good for any particular purpose. Our products are sold with the understanding that the user will determine their adaptability for their intended uses. We are not bound by any other warranty, expressed or implied. Under no circumstances are we liable for loss, damage, expense or consequential damages of any kind arising out of the use or inability to use our products.

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GRAINGER. FOR THE ONES WHO GET IT DONE

[redacted]

[X] Close this window MSDS

Common Name: PAN-L-BOND CONSTRUCTION ADHESIVE
Manufacturer: W.J. RUSCOE
MSDS Revision Date: 10/3/2001

Grainger Item Number(s): 48X167, 48X168
Manufacturer Model Number(s):

MSDS Table of Contents

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MATERIAL SAFETY DATA SHEET

COMPLIES WITH 29 CFR 1910.1200 HAZARD COMMUNICATION STANDARD

W.J. RUSCOE COMPANY
485 KENMORE BLVD
AKRON, OHIO 44301-1013

PHONE: (330)253-8148

FAX: (330)253-2933

EMERGENCY TELEPHONE: 800/424-9300 (CHEMTREC - 24 HOURS A DAY)

PREPARED: 10/03/01

DATE PRINTED: 10/22/01

SECTION 1 - PRODUCT IDENTIFICATION

top

MSDS REFERENCE NO.: P-21

PRODUCT NAME: PAN-L-BOND CONSTRUCTION ADHESIVE

CAS NUMBER: NONE

PRODUCT USE: CONSTRUCTION ADHESIVE

PRODUCT CLASS: SOLVENT BASED

HMIS HAZARD RATING:
HEALTH 2
FIRE 3
REACTIVITY 0

SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

top

HAZARDOUS INGREDIENTS	CAS NUMBER	PERCENT
ACETONE	67-64-1	13.35
HEXANE	110-54-3	13.18
TOLUENE	108-88-3	8.31

OSHA PELS & ACGIH TLVS ARE LISTED IN SECTION 8 WHERE APPLICABLE.

SECTION 3 - HAZARD IDENTIFICATION

top

NOTE:
REPEATED AND PROLONGED OVEREXPOSURE TO THE MIXTURE OF SOLVENT(S) LISTED IN SECTION 2 CAN RESULT IN SYSTEMIC EFFECTS INCLUDING PERMANENT BRAIN, NERVOUS SYSTEM, LIVER, AND KIDNEY DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING & INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

EMERGENCY OVERVIEW:

PRODUCT IS A BEIGE, MEDIUM VISCOSITY MASTIC.

DANGER:
EXTREMELY FLAMMABLE, VAPOR HARMFUL. CONTAINS ACETONE, TOLUENE AND HEXANE. VAPORS CAN CAUSE FLASH FIRE. VAPORS CAN IGNITE EXPLOSIVELY. PREVENT BUILDUP OF VAPORS BY OPENING ALL WINDOWS AND DOORS TO CREATE CROSS-VENTILATION. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. DO NOT SMOKE. TURN OFF STOVES, HEATERS AND SPARKING ELECTRIC MOTORS. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. AVOID PROLONGED BREATHING OF VAPOR. KEEP OUT OF THE REACH OF CHILDREN.

ROUTES OF ENTRY:
INGESTION: YES
INHALATION: YES
SKIN: YES
EYE: YES

INHALATION:

AVOID BREATHING VAPOR OR MISTS.

MAY CAUSE HEADACHES AND DIZZINESS.

HIGH VAPOR CONCENTRATIONS ARE IRRITATING TO THE NOSE, THROAT, AND LUNGS AND CAN CAUSE SYSTEMIC EFFECTS.

VAPORS CAN READILY ACCUMULATE IN CONFINED OR POORLY VENTILATED AREAS.

INGESTION:
INGESTION IS NOT A PROBABLE ROUTE OF EXPOSURE. HARMFUL IF SWALLOWED.

SKIN:
MAY BE HARMFUL IF ABSORBED THROUGH SKIN, MAY PRODUCE KIDNEY, LIVER AND

CENTRAL NERVOUS SYSTEM DAMAGE.

A SINGLE EXPOSURE IS NOT LIKELY TO RESULT IN THE MATERIAL BEING ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS.

EYE: SUBSTANCE MAY CAUSE SEVERE EYE IRRITATION.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
PREEXISTING NEUROLOGICAL CONDITIONS, SKIN DISORDERS, AND RESPIRATORY DISEASE.

CARCINOGENICITY:
IARC: NO
NTP: NO
OSHA: NO

REPRODUCTIVE TOXICITY:
TOLUENE MAY BE HARMFUL TO THE HUMAN FETUS BASED ON POSITIVE TEST RESULTS WITH LABORATORY ANIMALS. CASE STUDIES SHOW THAT PROLONGED INTENTIONAL ABUSE OF TOLUENE DURING PREGNANCY CAN CAUSE BIRTH DEFECTS IN HUMANS.

TARGET ORGANS:
PROLONGED OR REPEATED OVEREXPOSURE MAY CAUSE EYE, SKIN, RESPIRATORY SYSTEM, CENTRAL NERVOUS SYSTEM, PERIPHERAL NERVOUS SYSTEM, LIVER AND KIDNEY DAMAGE.

SECTION 4 - FIRST AID MEASURES

top

EPINEPHERINE AND OTHER SYMPATHOMIMETIC DRUGS MAY INITIATE, CARDIAC ARRHYTHMIAS (IRREGULAR BEATING) IN PERSONS EXPOSED TO HIGH CONCENTRATIONS OF HEXANE (E.G. IN ENCLOSED SPACES OR WITH DELIBERATE ABUSE). IF USED, MONITOR HEART ACTION CLOSELY. CONSIDER USE OF OTHER DRUGS WITH LESS ARRHYTHMOGENIC POTENTIAL.

INHALATION:
REMOVE TO FRESH AIR. IF DIFFICULTY PERSISTS SEEK MEDICAL ATTENTION.

INGESTION:
CALL POISON CONTROL CENTER IMMEDIATELY. FOLLOW THEIR SPECIFIC INSTRUCTIONS. DO NOT INDUCE VOMITING.

SKIN:
WASH WITH SOAP AND WATER. CONTACT A PHYSICIAN IF IRRITATION DEVELOPS OR PERSISTS.

EYES:
HOLD EYELIDS APART AND FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION.

SECTION 5 - FIRE-FIGHTING MEASURES

top

FLAMMABILITY CLASS (OSHA): IB

FLASH POINT:
< 0 F
SETAFLASH

EXPLOSIVE RANGE:
LOWER EXPLOSIVE LIMIT: 1.2%
UPPER EXPLOSIVE LIMIT: 12.8%

FLAMMABLE LIQUID. CAN FORM EXPLOSIVE MIXTURES AT TEMPERATURES AT OR ABOVE THE FLASHPOINT

EXTINGUISHING MEDIA:

USE ALCOHOL FOAM, CARBON DIOXIDE, OR DRY CHEMICAL WHEN FIGHTING FIRES INVOLVING THIS PRODUCT.

HAZARDOUS COMBUSTION PRODUCTS:
OXIDES OF CARBON MAY BE RELEASED DURING COMBUSTION.

FIRE FIGHTING PROCEDURES:
WEAR A NIOSH APPROVED SELF CONTAINED BREATHING APPARATUS. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

WATER MAY BE INEFFECTIVE, BUT MAY BE USED TO COOL EXPOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO IGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

top

CONTAINMENT TECHNIQUES:
USE INERT ABSORBENT TO DIKE THE SPILL. KEEP AWAY FROM DRAINS.

CLEAN-UP:
IF POSSIBLE PUMP LIQUID INTO AN APPROVED CONTAINER OR SPREAD ABSORBENT OVER SPILL AND SHOVEL (USE NON-SPARKING EQUIPMENT) PRODUCT / ABSORBENT MIXTURE INTO AN APPROVED CONTAINER. IF PRODUCT HAS DRIED, SCRAPE UP AND PLACE IN AN APPROVED CONTAINER.

EMERGENCY MEASURES:
ISOLATE HAZARD AREA. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING AREA. WEAR ALL APPROPRIATE PERSONAL PROTECTION EQUIPMENT (PPE) (SEE SECTION 8).

SECTION 7 - HANDLING AND STORAGE

top

HANDLING:
AVOID BREATHING VAPORS FROM THE HEADSPACE OF CONTAINERS.
KEEP LID CLOSED WHEN NOT IN USE.
USE ONLY IN WELL VENTILATED AREA.
FOLLOW ALL MSDS/LABEL PRECAUTIONS EVEN AFTER CONTAINER IS EMPTIED.
CONTAINERS MAY RETAIN PRODUCT RESIDUES AND VAPORS.

STORAGE:

KEEP AWAY FORM SOURCES OF IGNITION.

DO NOT STORE ABOVE 110F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED & PROTECTED FOR STORAGE OF NFPA CLASS 1-B FLAMMABLE MATERIALS.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

top

OCCUPATIONAL EXPOSURE LIMITS:

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
ACETONE	500.00 PPM	N/EST	1000.00 PPM	N/EST	1000.00 PPM
HEXANE	50.00 PPM	N/EST	N/EST	N/EST	500.00 PPM
TOLUENE	50.00 PPM	N/EST	N/EST	N/EST	200.00 PPM

THE OSHA CEILING FOR TOLUENE IS 300 PPM.

ENGINEERING CONTROLS:

USE LOCAL EXHAUST AS NEEDED TO MAINTAIN OCCUPATIONAL EXPOSURE LIMITS.
MAINTAIN STANDARD PLANT VENTILATION.

OTHER:
FACILITIES STORING OR UTILIZING ANY CHEMICAL SHOULD BE EQUIPPED WITH AN EYEWASH FACILITY AND A SAFETY SHOWER.

RESPIRATORY PROTECTION:
WHERE EXPOSURE LIMITS MAY BE EXCEEDED SELECT A NIOSH APPROVED RESPIRATOR WITH APPROPRIATE PROTECTION FACTOR AND CARTRIDGE FOR THE SPECIFIC CONTAMINANTS. FOLLOW REQUIREMENTS FOR RESPIRATORY PROTECTION IN OSHA 1910.134.

EYE PROTECTION:
CHEMICAL SPLASH GOGGLES (ANSI Z87.1 OR APPROVED EQUIVALENT).

SKIN PROTECTION: WHERE SKIN CONTACT CAN OCCUR, WEAR IMPERVIOUS GLOVES.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

top

FORM: MASTIC

APPEARANCE/COLOR: BEIGE

ODOR: SOLVENT

SOLUBILITY (IN WATER): NIL

PH VALUE: NOT APPLICABLE

BOILING RANGE/POINT: 121. DEG. F

EVAPORATION RATE: FASTER THAN N-BUTYL ACETATE

% VOLATILE: 34.%

SPECIFIC GRAVITY: 1.08

VOC: 282 G/L

SECTION 10 - STABILITY AND REACTIVITY

top

STABILITY: THIS PRODUCT IS STABLE

HAZARDOUS POLYMERIZATION: HAZARDOUS POLYMERIZATION WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, SPARKS, OPEN FLAME

INCOMPATIBILITY: STRONG OXIDIZING AGENTS, ACIDS AND BASES.

HAZARDOUS DECOMPOSITION PRODUCTS: WILL NOT OCCUR.

SECTION 11 - TOXICOLOGICAL INFORMATION

top

ACETONE - ACUTE:
ACETONE HAS A LOW ORDER OF ACUTE AND INHALATION TOXICITY. ACETONE IS A SLIGHT SKIN IRRITANT AND MODERATELY SEVERE EYE IRRITANT. EXCESSIVE INHALATION CAN CAUSE HEADACHE, DRUNKENNESS, AND WEAKNESS.

ACETONE - CHRONIC:
KIDNEY DAMAGE AND ANEMIA CAN RESULT FROM SUSTAINED HIGH LEVEL EXPOSURE. ACETONE IS REPORTED TO POTENTIATE THE LIVER TOXICITY OF CHLOROFORM.

HEXANE - ACUTE:
INGESTION OF HEXANE CAN CAUSE NAUSEA, VOMITING, STOMACH PAIN, AND DIARRHEA. HEXANE CAN IRRITATE THE SKIN AND EYES. ACUTELY, THE MOST COMMON TOXIC EFFECTS ARE CENTRAL NERVOUS SYSTEM DEPRESSION AND CHEMICAL PNEUMONITIS RESULTING FROM ASPIRATION INTO THE LUNGS FOLLOWING INGESTION.

HEXANE - CHRONIC:
DERMAL IRRITATION AND CENTRAL NERVOUS SYSTEM DEPRESSION ACCOMPANIED BY PERIPHERAL SYSTEM DAMAGE (POLYNEUROPATHY) ARE COMMON TRAITS OF SUSTAINED OVEREXPOSURE.

TOLUENE - ACUTE:
TOLUENE IS A CENTRAL NERVOUS SYSTEM DEPRESSANT AND SKIN AND MUCOUS MEMBRANE IRRITANT. SEVERE DERMATITIS MAY RESULT FROM ITS DRYING AND DEFATTING ACTION. TOLUENE IS AN ASPIRATION HAZARD CAUSING CHEMICAL PNEUMONITIS.

TOLUENE - CHRONIC:
TOLUENE CAN CAUSE CARDIAC SENSITIZATION. IT IS TOXIC TO THE KIDNEY, LIVER AND CAN CAUSE EFFECTS ON THE BLOOD SYSTEM SUCH AS INCREASED CLOTTING TIME.

TOLUENE MAY BE HARMFUL TO THE HUMAN FETUS BASED ON POSITIVE TEST RESULTS IN LABORATORY ANIMALS. CASE STUDIES SHOW THAT PROLONGED INTENTIONAL ABUSE OF TOLUENE DURING PREGNANCY CAN CAUSE BIRTH DEFECTS IN HUMANS.

SECTION 12 - ECOLOGICAL INFORMATION

top

THIS FORMULATION HAS NOT BEEN TESTED FOR ENVIRONMENTAL EFFECTS.

SECTION 13 - DISPOSAL CONSIDERATIONS

top

WASTE DISPOSAL:
DISPOSAL OF THIS PRODUCT MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

CONTAINER DISPOSAL:
DISPOSAL OF THIS CONTAINER SHOULD COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14 - TRANSPORT INFORMATION

top

UN NUMBER: UN1133

UN PACK GROUP: II

UN CLASS: 3

ICAO/IATA CLASS: 3

IMDG CLASS: 3

SHIPPING NAME: ADHESIVES CONTAINING A FLAMMABLE LIQUID

PACKAGING MAY NOT BE APPROVED FOR SHIPPING BY AIR. PLEASE CONTACT FRANKLIN INTERNATIONAL FOR FURTHER INFORMATION.

SECTION 15 - REGULATORY INFORMATION

top

SARA TITLE III SECTION 313:

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT OF 1986 AND OF 40 CFR 372:

CHEMICAL NAME	CAS NUMBER	PERCENT
HEXANE	110-54-3	13.18
TOLUENE	108-88-3	8.31

PROP 65 (TERATOGEN):

WARNING:
THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

CHEMICAL NAME	CAS NUMBER	PERCENT
TOLUENE	108-88-3	8.31

TSCA (TOXIC SUBSTANCES CONTROL ACT INVENTORY):
ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY EXCEPT AS EXEMPTED.

PENNSYLVANIA:

HAZARDOUS COMPONENTS REQUIRED TO BE LISTED AT 1% OR MORE:

ACETONE; 2-PROPANONE	67-64-1
TOLUENE; BENZENE, METHYL-	108-88-3
KAOLIN CLAY; KAOLIN	1332-58-7
HEXANE; HEXANE	110-54-3
CRYSTALLINE SILICA; QUARTZ	14808-60-7

NON-HAZARDOUS INGREDIENTS REQUIRED TO BE LISTED AT 3%:

PETROLEUM HYDROCARBON RESIN	68131-99-7
PETROLEUM HYDROCARBON RESIN	68132-00-3
STYRENE-BUTADIENE RUBBER	9003-55-8

NEW JERSEY:

CLAY	1332-58-7
PETROLEUM HYDROCARBON RESIN	68131-99-7
STYRENE-BUTADIENE RUBBER	9003-55-8
ACETONE	67-64-1
HEXANE	110-54-3

SECTION 16 - OTHER INFORMATION

top

DISCLAIMER:
WHILE THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE AS OF THE DATA HEREOF, THE RUSCOE COMPANY MAKES NO WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

MSDS NAME: PAN-L-BOND CONSTRUCTION ADH.

MSDS NUMBER: P-21

Krystal Para Material Safety Data Sheet

Section 1
Chemical Product & Company Information

Emergency Contact: (Spill/Release) (800) 424-9300
Information Number: (800) 989-7487
Manufactured by Krystal:
Lagasse Brothers
1525 Kuebel Street
New Orleans, LA 70123
Product Name: **Para Blocks and Crystals**
Product Numbers: 7355, B04, G20, PBS, U03, U04W16, W24

Section 2
Composition/Information on Ingredients

Paradichlorobenzene C.A.S. # 106-46-7
Percent >99% OSHA PEL: 75 PPM ACGIH: 10 PPM
Other Limits: ACGIH-STEL: 110 PPM

Section 3
Hazards Identifications

HMIS Codes:
Health: 2 Flammability: 2 Reactivity: 0
Flash Point: 125 degrees F (Tag closed cup)
Flammability Limits: Not Established
LEL: 2.5 UEL: Not Established

Section 4
First Aid Measures

Emergency and First Aid Procedures:
Eyes: Remove contact lenses. Flush eyes with water for 15 minutes.
Skin: Wash affected area with soap and water
Inhalation: Remove to fresh air
Ingestion: Rinse mouth, DO NOT induce vomiting. Give plenty of water or milk. Contact a physician.

Section 5
Fire Fighting Measures

Extinguishing Media: Water spray, carbon dioxide, dry chemical
Special Fire Fighting Procedures: Full protective equipment, including pressure demand self-contained breathing apparatus and turnout equipment should be worn by fire fighters and others exposed to combustion by products.
Unusual Fire & Explosion Hazards: None known

Section 6
Accidental Release Measures

Steps to be taken in case of material release or spill: Scoop up and place in closed container. Allow residue to evaporate.

Section 7
Handling and Storage

Precautions to be taken in handling and storing: Store in tightly sealed container, away from heat and flame. Avoid exposure to concentrations in excess of recommended limits.
Other Precautions: Do not wear contact lenses when handling paradichlorobenzene. Always practice good housekeeping and hygienic measures. Clean up spills immediately.

Section 8
Exposure Controls/Personal Protection

Ventilation: Local Exhaust: Use in well ventilated areas
Special: Not Applicable
Mechanical: Not Applicable
Other: Not Applicable
Protective Gloves: None when used as directed
Eye Protection: Do not touch eyes with para contaminated hands
Other Protective Clothing or Equipment: None
Work/Hygienic Practices: Wash with soap and water after coming in contact with product.

Section 9
Physical and Chemical Properties

Boiling Point: 345.2 degrees F
Vapor Pressure: 0.6 mmHg
Vapor Density (Air=1): 5.1
Specific Gravity (Water=1): 1.245-1.250
Melting Point: ~127 degrees F
Evaporations Rate: (Butyl Acetate = 1) <1
Solubility in water: 0.008% by weight
Appearance: Crystalline solid, various colors and fragrances

Section 10
Stability and Reactivity

Stability: Stable
Conditions to Avoid: None
Incompatible Materials: None known
Hazardous Decomposition Products: Oxides of carbon, smoke, soot, hydrogen chloride and phosgene when burned.
Hazardous Polymerization: Will not occur

Section 11
Toxicological Information

Routes of Entry:
Inhalation: Yes Skin: Yes Eyes: No Ingestion: Unlikely
Health hazards (acute & chronic): Exposure to concentrations above permissible limits cause depression of the central nervous system.
Eyes: May cause irritation
Skin: May cause irritation
Ingestion: Depression of central nervous system
Inhalation: Depression of central nervous system
Carcinogenicity: Inhalation studies indicate paradichlorobenzene in group C carcinogen category, possible human carcinogen.
Signs & Symptoms of Exposure:
Eyes and Skin: Irritation, redness
Ingestion/Inhalation:Headaches, dizziness, nausea, feeling of drunkenness and cardiac sensitization maybe experienced by some individuals when exposure exceeds permissible limits.
Medical conditions generally aggravated by exposure: None known

Section 12
Ecological Information

Not Established

Section 13
Disposal Considerations

Waste Disposal Method: Dispose only in accordance with applicable federal, state and local laws and regulations.

Section 14
Transport Information

DOT Classifications: Non Hazardous

Section 15
Regulatory Information

None Required

Section 16
Other Information

None Required

Paradichlorobenzene is subject to the reporting requirement of Section 313 of the emergency planning and community right to know act of 1986 and CFR: (Sara, Title III).

This compound appears on California's proposition 65 list of chemicals (CodeC) and is listed as a toxic chemical by the state of Florida.

Date Prepared: August 6, 2003
By: Jeff Smith, Ph.D/Chief Chemist

CONTRAC® All-Weather Blox MSDS

MANUFACTURER'S ADDRESS:	PREPARED BY:	TELEPHONE NO:	EMERGENCY PHONE NOS:
BELL LABORATORIES, INC. 3699 Kinsman Blvd, Madison, WI 53704	PSM/CAR	(608) 241-0202	**Medical** (877) 854-2494 **Transportation (Spills)** (800) 424-9300 CHEMTREC
PRODUCT NAME: CONTRAC® All-Weather Blox			
USE: Anticoagulant Rodenticide	**BAIT FORM:** Formulated Dry Bait		**EPA REGISTRATION NO:** 12455-79

SECTION I. HAZARDOUS INGREDIENTS

INGREDIENT NAME	% BY WEIGHT	CURRENT TLV
Bromadiolone [3-[3-(4'-Bromo-[1,1'-biphenyl]-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxy-2H-1-benzopyran-2-one] CAS No. 28772-56-7	0.005 %	N/A

This product contains no components subject to the reporting requirements of Section 313 of the Superfund Amendment and Reauthorization Act (SARA) of 1986

SECTION II. PHYSICAL DATA

APPEARANCE:	COLOR:	ODOR:	SPECIFIC GRAVITY:
Polygonal Block	Blue	Sweet, grain-like	0.629 gm/cc
VAPOR DENSITY:	**MELTING POINT:**	**WATER REACTIVITY:**	**EVAPORATION RATE:**
N/A	N/A	N/A	N/A
VAPOR PRESSURE:	**BOILING POINT:**	**SOLUBILITY:**	**BULK DENSITY:**
N/A	N/A	Not soluble in water	N/A

SECTION III. FIRE AND EXPLOSION DATA

FLASH POINT (Method Used):	FLAMMABLE LIMIT:	AUTOIGNITION TEMP:
N/A	**Upper Limit**: N/A **Lower Limit:** N/A	N/A

EXTINGUISHING MEDIA:
Extinguish with water, foam or inert gas.

SPECIAL FIREFIGHTING PROCEDURES:
Firefighters should be equipped with protective clothing and self-contained breathing apparatus.

UNUSUAL FIRE OR EXPLOSION HAZARDS:
None

SECTION IV. REACTIVITY HAZARD DATA

STABILITY:	CONDITIONS TO AVOID:
Stable	None
POLYMERIZATION:	**CONDITIONS TO AVOID:**
Will not occur	None

INCOMPATIBILITY (MATERIALS TO AVOID):	HAZARDOUS DECOMPOSITION PRODUCTS:
Strongly alkaline materials	Oxides of carbon

SECTION V. TOXICITY DATA

LD50, ORAL (INGESTION):	LD50, DERMAL (SKIN CONTACT):	LC50, INHALATION:
>5000 mg/kg (rats)	> 5001 mg/kg (rats)	N/A
EYE IRRITATION:	**SKIN IRRITATION:**	**DERMAL SENSITIZATION:**
None (rabbits)	None (rabbits)	Not considered a Sensitizer

SECTION VI. HEALTH HAZARDS

PRIMARY ROUTE OF ENTRY:
Ingestion

SIGNS & SYMPTOMS OF EXPOSURE:
Nausea, vomiting, loss of appetite, extreme thirst, lethargy, diarrhea, bleeding.

EMERGENCY FIRST AID PROCEDURES:
Eyes: Flush with cool water for at least 15 minutes. If irritation develops, obtain medical assistance.
Skin: Wash with soap and water.
Ingestion: Call physician or emergency phone number immediately. Do not give anything by mouth or induce vomiting unless instructed by physician.
Inhalation: None.

NOTE TO PHYSICIAN: If ingested, administer Vitamin K_1 intramuscularly or orally as indicated by bishydroxycoumarin overdoses. Repeat as necessary as based upon monitoring of prothrombin times.

SECTION VII. CONTROL AND PROTECTIVE MEASURES

RESPIRATOR TYPE:
Not required

EYE PROTECTION:	GLOVES (Recommended):	VENTILATION:
Not required	Rubber Gloves	Not required

OTHER PROTECTIVE MEASURES:
Not required

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:
HEALTH: 1 (Caution) **FIRE**: 0 (Will not burn) **REACTIVITY**: 0 (Stable) **SPECIFIC HAZARD**: None

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) RATINGS:
HEALTH: 2 (Moderate) **FLAMMABILITY**: 0 (Minimal) **REACTIVITY**: 0 (Minimal) **PROTECTIVE EQUIPMENT:** B

SECTION VIII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN THE EVENT MATERIAL IS RELEASED OR SPILLED:
Sweep up spilled material, place in properly labeled container for disposal or re-use.

WASTE DISPOSAL METHOD:
Wastes resulting from use may be disposed of on-site or at an approved waste disposal facility. Dispose of all wastes in accordance with all Federal, state and local regulations.

SECTION IX. SPECIAL PRECAUTIONS AND STORAGE DATA

STORAGE TEMPERATURE:	AVERAGE SHELF LIFE:
Room temperature	Bait is stable for a minimum of 1 year when stored at room temperature.

SPECIAL SENSITIVITY (HEAT, LIGHT, MOISTURE):
Avoid exposure to light and extreme humidity

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Store in a cool, dry place inaccessible to children, pets and wildlife. Keep container tightly closed when not in use. Avoid contamination of lakes, streams and ponds by use, storage or disposal. Wash thoroughly with soap and water after handling.

SECTION X. SHIPPING DATA

DOT SHIPPING NAME:	DOT HAZARD CLASSIFICATION:
None required	Non-hazardous
DOT LABELS REQUIRED:	**FREIGHT CLASSIFICATION:**
None required	LTL Class 60

WARRANTY: The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. Bell Laboratories, Inc. provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your consideration and investigation. The user is responsible to ensure that they have all current data relevant to their particular use.

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT & COMPANY IDENTIFICATION

Resolv™ Soft Bait
EPA Reg. No. 7173-297

Other Designation: Anticoagulant rodenticide with Bromadiolone
Manufacturer: **Liphatech, Inc.**
3600 W. Elm Street, Milwaukee, WI 53209
Emergency Phone: 414-351-1476 Monday-Friday, 8:00 am-4:30 pm CST
After Hours: Call CHEMTREC at 1-800-424-9300

SECTION 2 INGREDIENT INFORMATION

Hazardous Ingredient:	CAS Number:	OSHA PEL:	ACGIH TLV:	ACGIH STEL:
Bromadiolone	28772-56-7	Not assigned	Not assigned	Not assigned

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview: May be harmful if swallowed or absorbed through the skin, because this material may reduce the clotting ability of the blood and cause bleeding.

Primary Entry Routes: Oral (swallowing), dermal (absorption through skin)

Acute Effects (Signs and Symptoms of Overexposure):

- Eyes: May cause temporary eye irritation.

- Skin: May be harmful if absorbed through skin. Symptoms of toxicity include lethargy, loss of appetite, reduced blood clotting ability and bleeding.

- Inhalation: Due to this product's solid form, inhalation is unlikely.

- Ingestion: May be harmful if swallowed. Symptoms of toxicity include lethargy, loss of appetite, reduced clotting ability of blood, and bleeding.

Chronic Effects: Prolonged and/or repeated exposure to small amounts of product can produce cumulative toxicity. Symptoms of toxicity include lethargy, loss of appetite, reduced clotting ability of blood, and bleeding.

Medical Conditions Aggravated by Exposure: Bleeding disorders

Target Organs: Blood

Carcinogenicity: Contains no known or suspected carcinogens.

HMIS: Health – 2, Flammability – 0, Reactivity – 0

SECTION 4 FIRST AID MEASURES

Eyes: Flush with water. Get medical attention if irritation persists.

Skin: Wash with soap and water. Get medical attention if irritation persists.

Inhalation: If inhaled, remove person to fresh air and Get medical attention.

Ingestion: Call a physician or poison control center immediately. Have the product label available for medical personnel to read.

Induce vomiting under the direction of medical personnel. Drink 1 or 2 glasses of water and induce vomiting by touching the back of throat with finger. If syrup of ipecac is available, give 1 tablespoon (15 ml) followed by 1 or 2 glasses of water. If vomiting does not occur within 20 minutes, repeat this dosage once. Do not induce vomiting or give anything by mouth to an unconscious person.

Note to Physician: This rodenticide contains an anticoagulant ingredient. If ingested, administer vitamin K_1 intramuscularly or orally, as indicated in bishydroxycoumarin overdoses. Repeat as necessary based on monitoring of prothrombin times.

For information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents) call the National Pesticide Information Center at 1-800-858-7378.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point: None
Autoignition Temp.: Not determined
Explosive Limits: LEL: Not applicable
UEL: Not applicable
Extinguishing Media: Use media suitable for the surrounding fire
Unusual Fire or Explosion Hazards: None known
Fire Fighting Instructions: Firefighters should wear self-contained breathing apparatus (full facepiece) and full protective clothing. Contain runoff to prevent pollution.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Large Spill/Leak Procedures: Isolate and contain spill. Limit access to the spill area to necessary personnel. Do not allow spilled material to enter sewers, streams or other waters. Scoop up spilled material and place in a closed, labeled container for use or disposal.

Small Spills: Scoop up material for use according to label instructions.

SECTION 7 STORAGE AND HANDLING

Storage Requirements: Store in original container in a cool, dry area out of reach of children, pets and domestic animals. Do not contaminate water, food or feed. Keep container tightly closed. Do not remove or destroy the product label.

Handling Precautions: Read the entire product label before using this rodenticide. Carefully follow all cautions, directions and use restrictions on the label. Avoid contact with eyes, skin or clothing.

SECTION 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

Ventilation: Special ventilation is not required for the normal handling and use of this product when following the label instructions.

Protective Clothing/Equipment: None required for normal handling.

Respirator: None required when used according to label instructions.

Contaminated Equipment: Damaged or unwanted bait stations and bait holders should be wrapped in paper and discarded in trash.

Comments: Never eat, drink or smoke in work areas. Practice good personal hygiene after using this product. Wash arms, hands and face with soap and water after handling this product, and before eating and smoking. Launder contaminated clothing separate from street clothes.

SECTION 9 PHYSICAL & CHEMICAL PROPERTIES

Physical State:	Paste	**Water Solubility:**	Negligible
Color:	Green	**% Volatile (Volume):**	Not applicable
Odor:	Raw grain odor	**Specific Gravity:**	1.20 g/cc
Melting Point:	Not available	**Vapor Pressure:**	Not applicable
Boiling Point:	Not applicable	**Vapor Density:**	Not applicable
Freezing Point:	Not applicable	**pH:**	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: None
Hazardous Polymerization: Will not occur
Chemical Incompatibilities: Alkaline materials
Hazardous Products of Decomposition: Oxides of carbon

SECTION 11 TOXICOLOGICAL INFORMATION

Eye Effects/Eye Irritation: Mild, transient irritant
Acute Oral Effects: LD_{50} (oral-rat): >5000 mg/kg
Acute Inhalation Effects: Not applicable
Acute Dermal Effects: LD_{50} (dermal-rabbit): >2000 mg/kg
Skin Irritation: Non-irritating
Skin Sensitization: Not a skin sensitizer

SECTION 12 ECOLOGICAL INFORMATION

This product is toxic to fish and wildlife. Do not apply this product directly to water, where surface water is present or to intertidal areas below the mean high water mark. Carefully follow label cautions and instructions to reduce hazards to children, pets and non-target wildlife.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal: Wastes resulting from the use of this product according to the label instructions must be disposed of as specified on the product label.

RCRA Waste Status: This product is not regulated as a hazardous waste under RCRA. State and local regulation may affect the disposal of this product. Consult your state or local environmental agency for disposal of waste generated other than by use according to label instructions.

SECTION 14 TRANSPORT INFORMATION

Transportation Data (49 CFR): This product is not regulated as a hazardous material for all modes of transportation within the U.S.

Hazard Class: Not applicable **ID No.:** Not applicable

SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are listed on the TSCA inventory.

SARA Section 313: Contains no reportable components.

OSHA Hazard Classification: Chronic health hazard.

Proposition 65: Contains no components subject to warning requirement.

SECTION 16 OTHER INFORMATION

Prepared by: T. Schmit **Date:** 1/3/2012

Information presented on this Material Safety Data Sheet is believed to be accurate at the time of publication. No warranty, expressed or implied, is made with regard to this information. This information may not be adequate for every application, and the user must determine the suitability of this information due to the manner/conditions of use, storage or local regulation.

MATERIAL SAFETY DATA SHEET
Tempo® Residual Insecticide

Date of Issue: August 29th, 2006

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name:	Tempo® Residual Insecticide
Other names:	Responsar 2.5 SC (NZ)
Product code:	6133878 (1 L)
Chemical group:	Pyrethroid
Recommended use:	Insecticide concentrate for use in general insect control
Formulation:	Suspension Concentrate (SC)
Supplier:	Bayer Environmental Science – A Business Group of Bayer CropScience Pty Ltd ABN 87 000 226 022
Address:	391 - 393 Tooronga Road, East Hawthorn Victoria 3123, Australia
Telephone:	(03) 9248 6888
Facsimile:	(03) 9248 6800
Website:	www.bayercropscience.com.au
Contact:	Technical Manager (03) 9248 6888
Emergency Telephone Number:	1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD
Toxic by inhalation and if swallowed. May cause sensitisation by skin contact.

Hazard designation:	Hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases:	R23/25 – Toxic by inhalation and if swallowed. R43 – May cause sensitisation by skin contact.
Safety phrases:	See Sections 4, 5, 6, 7, 8, 9, 13
ADG classification:	Not “dangerous goods” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
SUSDP classification:	Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L):
Betacyfluthrin	[68359-37-5]	25
Sulphuric acid	[7664-93-9]	0.5
Aqueous mixture of 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	[55965-84-9]	2.3
Other ingredients	Non-hazardous	1112.2

4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

Inhalation:	Move the patient to fresh air and keep at rest. Seek medical advice
Skin contact:	Remove any contaminated clothing and wash skin area thoroughly with soap and copious amounts of water. Symptoms can be partially alleviated by the application of a vitamin E or moisturising cream or anaesthetic ointment.
Eye contact:	Flush immediately with copious amounts of fresh running water. Seek medical advice if eyes are affected. Alleviate symptoms by instilling local anaesthetic drops e.g. 1% amethocaine hydrochloride eye drops.
Ingestion:	Call a physician or Poisons Information Centre immediately. Rinse mouth.
First Aid Facilities:	Provide eyewash and washing facilities in the workplace.
Symptoms:	Local symptoms include skin and eye paraesthesia which may be severe (usually transient with resolution within 24 hours), eye and mucous membrane irritation, cough. Systemic symptoms include discomfort in the chest, bronchial hypersecretion, pulmonary oedema, tachycardia, low blood pressure, palpitation, nausea, vomiting, diarrhoea, abdominal pain, salivation, dizziness, blurred vision, headache, apathy, anorexia, somnolence, coma, spasm, convulsions, tremors, ataxia, muscular fasciculation.
Medical attention:	Apply basic aid and decontamination procedures. Treat symptoms. There is no specific antidote. Note to physicians The presenting signs of overexposure usually relate to hyperaesthesia of nerve endings in skin and mucous membranes exposed to the chemical. These signs can only be treated symptomatically and resolve spontaneously within 24-48 hours. The skin and mucous membrane hyperaesthesia results from direct contact, not from systemic distribution of the chemical. Treat large intakes with gastric lavage, and charcoal administration. Use endotracheal intubation, and artificial respiration (if necessary). In cases of severe ingestions, cardiac and respiratory function should be monitored. In case of convulsions, diazepam is the anticonvulsant of choice. Thus seizure management should follow standard practice using benzodiazepines (with oxygen and airway protection), if insufficiently effective followed by Phenobarbital infusion as required for status epilepticus. A suggested regimen would be: Start with 10 to 30 mg diazepam by intravenous injection according to body weight, for children pro rata. This dose is to be repeated every 10 to 30 minutes according to the patient's response. Contraindications: adrenergic compounds (except for CRP) and high dose atropine. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Sprayed water jet, foam, extinguishing powder, CO_2, sand.
Hazards from combustion products:	In the event of fire, hydrogen chloride (HCl), hydrogen cyanide (HCN), hydrogen fluoride (HF), carbon monoxide (CO) and nitrous gases (NOx) may be released.
Precautions for fire fighters:	Fight fire in the early stages if safe to do so. Wear respiratory protection. In well ventilated areas wear full face mask with combination filter, eg., ABEK-P2 (offers no protection from carbon monoxide). In enclosed premises use a respirator with independent air supply. Contain firefighting water.

6. ACCIDENTAL RELEASE MEASURES

Prevent spillage from spreading or entering waterways and underground drains. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority. Take up with absorbent material such as sawdust, peat, or chemical binding agent. Fill material, along with any contaminated soil etc., into sealable containers. Clean affected area with an aqueous detergent and a small amount of water. Absorb this with hydrated lime and place in a sealable container. Spread hydrated lime over the affected area. Do not smoke, eat or drink during clean-up operations.

7. HANDLING AND STORAGE

Handling:	Keep out of reach of children.
Storage:	Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Store away from food, drink or animal feeding stuffs. To protect the quality of the product, avoid temperatures below minus 10^0C and above 40^0C. Store so that unauthorised persons do not have access.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards: NOHSC has not determined exposure standards for betacyfluthrin or any of the other ingredients in the formulation except:
Sulphuric acid TWA 1 mg/cu metre (ACGIH)
STEL 3 mg/cu metre (ACGIH)
Sulphuric acid is present in the product only at extremely low levels as a buffer (pH adjuster).

Engineering controls: No engineering controls are required for the normal use of this product according to label.

Personal Protective Equipment: Personal protective measures:
Avoid contact with eyes and skin. Do not inhale vapour and spray mist. If product is on the skin wash the affected area immediately with soap and water. If product enters the eye(s) flush the eye(s) immediately with copious amounts of fresh running water. Seek medical advice if eye(s) are affected.
Personal protective equipment:
When preparing the spray, wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow length PVC gloves. When using the prepared spray wear cotton overalls buttoned to the neck and wrist, a washable hat, and rubber gloves
Industrial hygiene:
After use and before eating, drinking or smoking, wash hands, arms, and face thoroughly with soap and water. After each day's use wash gloves, respirator or face piece, and if rubber, wash with detergent and warm water, and contaminated clothing. Do not eat or smoke while using the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Greyish white liquid suspension
Odour:	Slight characteristic smell
Vapour pressure:	Not available
Vapour density:	Not available
Boiling point:	Approx 100^{0}C
Freezing/melting point:	Not available
Solubility:	Miscible
Density:	Approx 1.140 kg/litre at 20^{0}C
pH:	3.0-7.0 (undiluted)
Flash Point:	No flash point up to 100^{0}C
Flammability (explosive) limits:	Not available
Auto-ignition temperature:	Not available
Octanol/water partition coefficient:	Not available
Formulation:	Suspension concentrate

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Hazardous polymerisation:	Hazardous polymerisation will not occur.
Incompatible materials:	Avoid strong acids, bases, and strong oxidising agents.
Hazardous decomposition products:	In the event of fire, hydrogen chloride (HCl), hydrogen cyanide (HCN), hydrogen fluoride (HF), carbon monoxide (CO) and nitrous gases (NOx) may be released.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation:	Toxic by inhalation. May irritate mucous membranes of nose and mouth.
Skin contact:	May irritate the skin.
Eye contact:	May irritate eyes.
Ingestion:	Toxic if swallowed.
Other:	None

ANIMAL TOXICITY DATA – PRODUCT:

Acute:

Oral toxicity:	LD_{50} rat: >2500 mg/kg
Dermal toxicity:	LD_{50} rat: >4000 mg/kg
Inhalation toxicity:	LC_{50} (4 hr) >4524 mg/m^3
Skin irritation:	Not irritating – rabbit
Eye irritation:	Not irritating – rabbit
Sensitisation:	Not sensitising - guinea pig

Chronic:

Non-carcinogenic, non-mutagenic, and non-teratogenic in laboratory species.

12. ECOLOGICAL INFORMATION – Beta-Cyfluthrin

DO NOT contaminate streams, rivers, or waterways with the chemical or used containers.

Fish toxicity:	LC_{50} (96 h): 0.33 μg/L; Golden orfe (*Leuciscus idus*) LC_{50} (96 h): 0.089 μg/L; Rainbow trout (*Oncorhynchus mykiss*) LC_{50} (96 h): 0.028 μg/L; Bluegill sunfish (*Lepomis macrochirus*)
Daphnia toxicity:	EC_{50} (48 h): 0.29 μg/L; Water flea (*Daphnia magna*)
Toxicity to algae:	EC_{50} (96 h) >10 μg/L; Green algae (*Scenedesmus subspicatus*)
Bird toxicity:	Acute oral LD_{50} for Japanese quail >2000 mg/kg
Bee toxicity:	LD50 <0.1 μg/bee
Other:	None
Environmental fate, persistence and degradation:	Degradation in soil is rapid. Leaching behaviour: is classified as immobile.

13. DISPOSAL CONSIDERATIONS

1) After intended use: Triple rinse containers before disposal and add rinsings to the tank mix or dispose of in a disposal pit away from waterways. Destroy empty containers by breaking, crushing or puncturing them. Bury containers at a depth of 500 mm or more at a safe disposal site, or take them to a dump that does not burn its refuse. Do not burn empty containers or product.
2) After spill or accident: Dispose of sealed containers at an approved local waste disposal site.

14. TRANSPORT INFORMATION

UN number:	Not applicable
Proper shipping name:	Not applicable
Class and Subsidiary Risk:	Not “dangerous goods” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
Packing Group:	Not applicable
EPG:	Not applicable
Hazchem code:	Not applicable

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority Approval Number: 54134

16. OTHER INFORMATION

Trademark information:	Tempo® is a Registered Trademark of Bayer.
Preparation information:	Replaces November 30th, 2004 edition. Reasons for update: Hazardous Substance Classification, Risk Phrases, Formulation Composition, First Aid Measures, Hazards from Combustion Products.
Data sources:	Bayer CropScience Pty Ltd product safety data and published data

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS

SAFETY DATA SHEET

Issuing Date: 27-Mar-2015 **Revision Date:** 27-Mar-2015 **Version** 1

1. IDENTIFICATION

Product Name	Cascade Gel Extra Action Dishwasher Detergent - Lemon Scent
Product ID:	99547487_RET_NG
Product Type:	Finished Product - Consumer (Retail) Use Only
Recommended Use	Dish Care
Restrictions on Use	Use only as directed on label.
Manufacturer	PROCTER & GAMBLE - Fabric and Home Care Division. Ivorydale Technical Centre. 5289 Spring Grove Avenue, Cincinnati, Ohio 45217-1087 USA
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

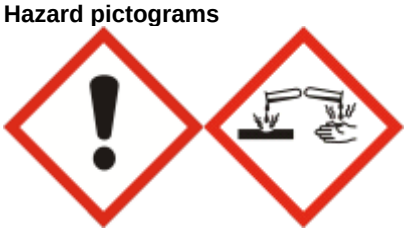
Hazard Category	
Skin corrosion/irritation	Category 2
Eye Damage / Irritation	Category 2A
Corrosive to metals	Category 1

Signal Word WARNING

Hazard Statements

Causes serious eye irritation
Causes skin irritation
May be corrosive to metals

Hazard pictograms



Precautionary Statements - Prevention	Wash hands thoroughly after handling Keep only in original container
Precautionary Statements - Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention IF SWALLOWED: Drink 1 or 2 glasses of water IF ON SKIN: Rinse with plenty of water If skin irritation occurs, get medical advice/attention Absorb spillage to prevent material damage
Precautionary Statements - Storage	Store in corrosive resistant container
Precautionary Statements - Disposal	Dispose of contents/container in accordance with local regulation
Hazards not otherwise classified (HNOC)	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Silicic acid, sodium salt	-	No	1344-09-8	10 - 15
Sodium carbonate	-	No	497-19-8	5 - 10
Sodium hydroxide	-	No	1310-73-2	1 - 5
Sodium hypochlorite	-	No	7681-52-9	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact	Rinse with plenty of water. Get medical attention immediately if irritation persists.
Skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Most important symptoms/effects, acute and delayed	None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical, CO_2, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in corrosive resistant container.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	CAS-No	ACGIH TLV	OSHA PEL	Mexico PEL
Sodium hydroxide	1310-73-2	Ceiling: 2 mg/m³	TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³	Mexico: Ceiling 2 mg/m³

Chemical Name	CAS-No	Alberta	Quebec	Ontario TWAEV	British Columbia
Sodium hydroxide	1310-73-2	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	CEV: 2 mg/m³	Ceiling: 2 mg/m³

No relevant exposure guidelines for other ingredients

Exposure controls

Engineering Measures **Distribution, Workplace and Household Settings:**
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
For sensitive skin or prolonged use, wear gloves

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	clear
Odor	Scented
Odor threshold	No information available

Property	Values	Note
pH value	11.35	(as 1% solution)
Melting/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	> 93.3 °C / > 200 °F	Closed cup
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.25	
Water solubility	100%	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.
Viscosity of Product	No information available	

VOC Content (%) Products comply with US state and federal regulations for VOC content in consumer

products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid None in particular.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation No known effect.
Skin contact Irritating to skin.
Ingestion No known effect.
Eye contact Causes serious eye irritation.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity No known effect.
Skin corrosion/irritation Irritating to skin.
Serious eye damage/eye irritation Causes serious eye irritation.
Skin sensitization No known effect.
Respiratory sensitization No known effect.
Germ cell mutagenicity No known effect.
Neurological Effects No known effect.
Reproductive toxicity No known effect.
Developmental toxicity No known effect.
Teratogenicity No known effect.
STOT - single exposure No known effect.
STOT - repeated exposure No known effect.
Target Organ Effects No known effect.
Aspiration hazard No known effect.
Carcinogenicity No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Silicic acid, sodium salt	1344-09-8	3400 mg/kg bw (Similar to OECD 401; standard acute method; rat)	> 5000 mg/kg bw (Read across data on AgSil TM 25 Potassium silicate solution; rat)	> 2.06 mg/L air (Read across data AgSil TM 25 Potassium silicate solution; EPA OPPTS 870.1300; standard acute method; rat)
Sodium carbonate	497-19-8	2800 mg/kg bw (Guideline not indicated; rat)	> 2000 mg/kg bw (EPA 16 CFR 1500.40; rabbit)	-
Sodium hypochlorite	7681-52-9	626 mg/kg bw (Similar to OECD 401; standard acute method; rat)	> 20000 mg/kg bw (Guideline: 16 CFR 1500.40 and similar to OECD 402; rabbit)	> 10.5 mg/L air (Similar to OECD 403; rat; 1 h)

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products	Products covered by this MSDS, in their original form, when disposed as waste, are corrosive hazardous waste, D002, according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.
California Hazardous Waste Codes (non-household setting)	331

14. TRANSPORT INFORMATION

DOT

UN no	UN3266
UN Proper shipping name	Corrosive liquid, basic, inorganic, n.o.s.
Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Sodium hypochlorite), 8, III, , Ltd. Qty.
Hazard Class	8
Packing Group	III
Emergency Response Guide Number	154

IMDG

UN Number	UN3266
UN Proper shipping name	Corrosive liquid, basic, inorganic, n.o.s.
Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Sodium hypochlorite), 8, III , Ltd. Qty.
Transport hazard class(es)	8
Packing Group	III
EmS-No	F-A, S-B

IATA

UN no	UN3266
UN Proper shipping name	Corrosive liquid, basic, inorganic, n.o.s.
Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Sodium hypochlorite), 8, III , Ltd. Qty.
Hazard Class	8
Packing Group	III
ERG Code	8L

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	
Sodium hypochlorite	7681-52-9	100 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X
Sodium hypochlorite	7681-52-9	100 lb	-	-	X
Hydrozincite (Zn5(CO3)2(OH)6)	12122-17-7	-	X	-	-

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
Sodium hydroxide	1310-73-2	X
Sodium hypochlorite	7681-52-9	X

Chemical Name	CAS-No	Massachusetts
Sulfuric acid sodium salt (1:2)	7757-82-6	X
Sodium hydroxide	1310-73-2	X
Sodium hypochlorite	7681-52-9	X

Chemical Name	CAS-No	Pennsylvania
Sulfuric acid sodium salt (1:2)	7757-82-6	X
Sodium hydroxide	1310-73-2	X
Sodium hypochlorite	7681-52-9	X
Hydrozincite (Zn5(CO3)2(OH)6)	12122-17-7	X

Chemical Name	CAS-No	Rhode Island
Sodium hydroxide	1310-73-2	X
Sodium hypochlorite	7681-52-9	X

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada

This product is in compliance with CEPA for import by P&G.

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 27-Mar-2015
Revision Date: 27-Mar-2015
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

JohnsonDiversey

Pledge Lemon (Aerosol)

HMIS		NFPA	Personal protective equipment
Health	0	0	None Required
Fire Hazard	4	4	
Reactivity	0	0	

Version Number: 2 *Preparation date: 2005-05-06*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Pledge Lemon (Aerosol)

MSDS #: 126026007
Product code: 126026007, 94430, 3694028
Recommended use: Furniture care.

Manufacturer, importer, supplier:

US Headquarters
JohnsonDiversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-0902
Phone: 1-888-352-2249
MSDS Internet Address:
www.johnsondiversey.com

Canadian Headquarters
JohnsonDiversey - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING. CONTENTS UNDER PRESSURE. FLAMMABLE LIQUID AND VAPOR.

Principle routes of exposure: Eyes. Skin. Inhalation.
Eye contact: None known.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral	LD50 Dermal	LC50 Inhalation
Butane	106-97-8	1 - 5%	Not available	Not available	65.8 g/m^3 (rat)
Propane	74-98-6	1 - 5%	Not available	Not available	Not available
Isobutane	75-28-5	1 - 5%	Not available	Not available	Not available

4. FIRST AID MEASURES

Eye contact: Rinse with plenty of water.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, water spray, foam, carbon dioxide.
Specific hazards: Aerosol product - Containers may rocket or explode in heat of fire.
Unusual hazards: None known
Specific methods: Aerosol Product - Containers may rocket or expode in heat of fire. Use water spray to keep fire-exposed containers cool.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Remove all sources of ignition. Ensure adequate ventilation.
Environmental precautions and clean-up methods: Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin and eyes. Avoid breathing vapors or mists. Use only in well-ventilated areas. CONTENTS UNDER PRESSURE. Do not puncture or incinerate. FOR COMMERCIAL AND INDUSTRIAL USE ONLY. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Store in a cool, dry, well ventilated area away from heat or open flame. Protect from freezing. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 degrees C or 120 degrees F. Do not pierce or burn, even after use. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements.

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions
Respiratory protection: No special requirements under normal use conditions
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Butane	106-97-8	1000 ppm (TWA)		
Propane	74-98-6	1000 ppm (TWA)	1000 ppm (TWA) 1800 mg/m³ (TWA)	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
pH: No information available
Appearance: Aerosol
Color: White
Odor: Lemon
Specific gravity: 0.928
Density: 0.919
VOC: 16.96
Flash point: <20 (°F) <-7 (°C)
Solubility: Emulsifiable

Bulk density: No information available
Dilution pH: No information available.
Vapor density: No information available
Evaporation rate: No information available
Boiling point/range: Not determined
Melting point/range: Not determined
Decomposition temperature: Not determined
Autoignition temperature: No information available
Viscosity: No information available
Partition coefficient (n-octanol/water): No information available
Solubility in other solvents: No information available

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.
Conditions to avoid: Do not freeze. Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Oral LD50 estimated to be greater than 5000 mg/kg Dermal LD50 estimated to be > 2000 mg/kg
Component Information: See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Use up contents if possible before disposal . If possible, recycle empty aerosol cans to the nearest steel recycling center .

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Isoparaffinic hydrocarbon solvent	68920-06-9	-	-	-	-
Silicones	63148-62-9	-	-	-	-
Butane	106-97-8	X	X	X	X
Isobutane	75-28-5	X	X	X	-
Propane	74-98-6	X	X	X	X

CERCLA / SARA
CAA HAP/CAA ODS/CWA Priority Pollutants: None

Canada
WHMIS hazard class: A Compressed gases, B5 Flammable aerosol.

Ingredient(s)	CAS #	NPRI
Propane	74-98-6	X

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

JohnsonDiversey

Pledge Lemon (Aerosol)

HMIS		NFPA	Personal protective equipment
Health	0	0	None Required
Fire Hazard	4	4	
Reactivity	0	0	

Version Number: 2 *Preparation date: 2005-05-06*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Pledge Lemon (Aerosol)

MSDS #: 126026007
Product code: 126026007, 94430, 3694028
Recommended use: Furniture care.

Manufacturer, importer, supplier:

US Headquarters
JohnsonDiversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-0902
Phone: 1-888-352-2249
MSDS Internet Address:
www.johnsondiversey.com

Canadian Headquarters
JohnsonDiversey - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING. CONTENTS UNDER PRESSURE. FLAMMABLE LIQUID AND VAPOR.

Principle routes of exposure: Eyes. Skin. Inhalation.
Eye contact: None known.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral	LD50 Dermal	LC50 Inhalation
Butane	106-97-8	1 - 5%	Not available	Not available	65.8 g/m^3 (rat)
Propane	74-98-6	1 - 5%	Not available	Not available	Not available
Isobutane	75-28-5	1 - 5%	Not available	Not available	Not available

4. FIRST AID MEASURES

Eye contact: Rinse with plenty of water.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, water spray, foam, carbon dioxide.
Specific hazards: Aerosol product - Containers may rocket or explode in heat of fire.
Unusual hazards: None known
Specific methods: Aerosol Product - Containers may rocket or expode in heat of fire. Use water spray to keep fire-exposed containers cool.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Remove all sources of ignition. Ensure adequate ventilation.
Environmental precautions and clean-up methods: Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin and eyes. Avoid breathing vapors or mists. Use only in well-ventilated areas. CONTENTS UNDER PRESSURE. Do not puncture or incinerate. FOR COMMERCIAL AND INDUSTRIAL USE ONLY. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Store in a cool, dry, well ventilated area away from heat or open flame. Protect from freezing. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 degrees C or 120 degrees F. Do not pierce or burn, even after use. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements.

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions
Respiratory protection: No special requirements under normal use conditions
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Butane	106-97-8	1000 ppm (TWA)		
Propane	74-98-6	1000 ppm (TWA)	1000 ppm (TWA) 1800 mg/m³ (TWA)	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
pH: No information available
Appearance: Aerosol
Color: White
Odor: Lemon
Specific gravity: 0.928
Density: 0.919
VOC: 16.96
Flash point: <20 (°F) <-7 (°C)
Solubility: Emulsifiable

Bulk density: No information available
Dilution pH: No information available.
Vapor density: No information available
Evaporation rate: No information available
Boiling point/range: Not determined
Melting point/range: Not determined
Decomposition temperature: Not determined
Autoignition temperature: No information available
Viscosity: No information available
Partition coefficient (n-octanol/water): No information available
Solubility in other solvents: No information available

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.
Conditions to avoid: Do not freeze. Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Oral LD50 estimated to be greater than 5000 mg/kg Dermal LD50 estimated to be > 2000 mg/kg
Component Information: See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Use up contents if possible before disposal . If possible, recycle empty aerosol cans to the nearest steel recycling center .

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Isoparaffinic hydrocarbon solvent	68920-06-9	-	-	-	-
Silicones	63148-62-9	-	-	-	-
Butane	106-97-8	X	X	X	X
Isobutane	75-28-5	X	X	X	-
Propane	74-98-6	X	X	X	X

CERCLA / SARA
CAA HAP/CAA ODS/CWA Priority Pollutants: None

Canada
WHMIS hazard class: A Compressed gases, B5 Flammable aerosol.

Ingredient(s)	CAS #	NPRI
Propane	74-98-6	X

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

JohnsonDiversey

Pledge Lemon (Aerosol)

HMIS		NFPA	Personal protective equipment
Health	0	0	None Required
Fire Hazard	4	4	
Reactivity	0	0	

Version Number: 2 *Preparation date: 2005-05-06*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Pledge Lemon (Aerosol)

MSDS #: 126026007
Product code: 126026007, 94430, 3694028
Recommended use: Furniture care.

Manufacturer, importer, supplier:

US Headquarters
JohnsonDiversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-0902
Phone: 1-888-352-2249
MSDS Internet Address:
www.johnsondiversey.com

Canadian Headquarters
JohnsonDiversey - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING. CONTENTS UNDER PRESSURE. FLAMMABLE LIQUID AND VAPOR.

Principle routes of exposure: Eyes. Skin. Inhalation.
Eye contact: None known.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral	LD50 Dermal	LC50 Inhalation
Butane	106-97-8	1 - 5%	Not available	Not available	65.8 g/m^3 (rat)
Propane	74-98-6	1 - 5%	Not available	Not available	Not available
Isobutane	75-28-5	1 - 5%	Not available	Not available	Not available

4. FIRST AID MEASURES

Eye contact: Rinse with plenty of water.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, water spray, foam, carbon dioxide.
Specific hazards: Aerosol product - Containers may rocket or explode in heat of fire.
Unusual hazards: None known
Specific methods: Aerosol Product - Containers may rocket or expode in heat of fire. Use water spray to keep fire-exposed containers cool.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Remove all sources of ignition. Ensure adequate ventilation.
Environmental precautions and clean-up methods: Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin and eyes. Avoid breathing vapors or mists. Use only in well-ventilated areas. CONTENTS UNDER PRESSURE. Do not puncture or incinerate. FOR COMMERCIAL AND INDUSTRIAL USE ONLY. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Store in a cool, dry, well ventilated area away from heat or open flame. Protect from freezing. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 degrees C or 120 degrees F. Do not pierce or burn, even after use. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements.

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions
Respiratory protection: No special requirements under normal use conditions
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Butane	106-97-8	1000 ppm (TWA)		
Propane	74-98-6	1000 ppm (TWA)	1000 ppm (TWA) 1800 mg/m³ (TWA)	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
pH: No information available
Appearance: Aerosol
Color: White
Odor: Lemon
Specific gravity: 0.928
Density: 0.919
VOC: 16.96
Flash point: <20 (°F) <-7 (°C)
Solubility: Emulsifiable

Bulk density: No information available
Dilution pH: No information available.
Vapor density: No information available
Evaporation rate: No information available
Boiling point/range: Not determined
Melting point/range: Not determined
Decomposition temperature: Not determined
Autoignition temperature: No information available
Viscosity: No information available
Partition coefficient (n-octanol/water): No information available
Solubility in other solvents: No information available

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.
Conditions to avoid: Do not freeze. Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Oral LD50 estimated to be greater than 5000 mg/kg Dermal LD50 estimated to be > 2000 mg/kg
Component Information: See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Use up contents if possible before disposal . If possible, recycle empty aerosol cans to the nearest steel recycling center .

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Isoparaffinic hydrocarbon solvent	68920-06-9	-	-	-	-
Silicones	63148-62-9	-	-	-	-
Butane	106-97-8	X	X	X	X
Isobutane	75-28-5	X	X	X	-
Propane	74-98-6	X	X	X	X

CERCLA / SARA
CAA HAP/CAA ODS/CWA Priority Pollutants: None

Canada
WHMIS hazard class: A Compressed gases, B5 Flammable aerosol.

Ingredient(s)	CAS #	NPRI
Propane	74-98-6	X

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Osmose

SAFETY DATA SHEET

1. Identification

Product identifier	**Aquawrap™**
Other means of identification SDS number	04-UTL
Recommended use	Fiberglass wrap repair system for utility poles.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Company name	Osmose Utilities Services, Inc.	
Address	635 Hwy 74 S Peachtree City, GA 30269 US	
Telephone	Phone Number:	770-632-6700
	Osmose Products Group:	716-319-3420
Website	www.osmoseutilities.com	
E-mail	products@osmose.com	
Contact person	Osmose Products Group	
Emergency phone number	CHEMTREC:	1-800-424-9300
General Information	Information below, except where noted, relates to the resin component of the product.	

2. Hazard(s) identification

Physical hazards	Not Classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization - skin	Category 1
	Sensitization - respiratory	Category 1
	Acute toxicity, inhalation	Category 4
	Specific target organ toxicity, single exposure	Category 3
	Specific target organ toxicity, repeated exposure	Category 2
	Carcinogenicity	Category 2 (by inhalation)
OSHA defined hazards	Not classified.	
Label elements		

Signal word	Danger
Hazard statement	Causes skin and eye irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms if inhaled. Harmful if inhaled. May cause respiratory irritation. May damage organs through repeated exposure. Suspected of causing cancer (by inhalation).
Precautionary statement	
Prevention	Do not breathe dust, fumes, mist, vapors and spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves, clothing, and eye/face protection.

Response	If exposed or concerned, get medical attention. **IF ON SKIN:** Wash with plenty of soap and water. If skin irritation or rash occurs, get medical attention. Take off contaminated clothing and wash it before reuse. **IF INHALED:** Remove person to fresh air and keep comfortable for breathing. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Storage	Store in a well-ventilated place. Keep containers tightly closed. Store in a secured area.
Disposal	Dispose of contents/container in accordance with local, regional, national and international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Substances/Mixture: Mixture.

Ingredient	% by WT	CAS #	67/548/EEC	Regulation (EC) 1272/2008 (CLP)
Fiberglass Fabric	>60%	65997-17-3	Not classified	Not classified
Polyisocyanate (based on MDI)	<26%	67815-87-6	See GHS Classifications above.	
Diphenylmethane- diisocyanate, isomers and homologues	<8%	9016-87-9		
Chopped Fiberglass	<2%	65997-17-3	Not classified	Not classified
Titanium Dioxide	<1.5%	13463-67-7	Not classified	Not classified

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove victim to fresh air and keep warm and at rest in a position comfortable for breathing. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention if symptoms occur. Soiled or soaked clothing or footwear should be soaked with water until material cures and disposed of. Cured material is NOT hazardous.

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids and roll eyes in a circular motion. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention.

Ingestion Wash out mouth with water. Remove dentures, if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. DO NOT induce vomiting. If person is conscious, give small amounts of water unless they feel sick. Get medical attention.

Most important symptoms/effects, acute and delayed.

Potential acute health effects:

Inhalation Exposure to decomposition products may cause a health hazard. Serious effects may be delayed after exposure. Harmful if inhaled in high airborne concentrations.

Skin contact Dust from this product may cause mechanical irritation.

Eye contact Dust from this product may cause mechanical irritation.

Ingestion Although ingestion is unlikely to occur, it may cause illness or irritation of the mouth, throat and/or gastrointestinal tract.

Overexposure Signs / Symptoms:

Inhalation Respiratory tract irritation, coughing, wheezing, breathing difficulty or asthmatic reaction.

Skin contact Irritation and/or Redness.

Eye contact Pain or Irritation. Watering. Redness.

Ingestion No further data.

Indication of immediate medical attention and special treatment needed.

Notes to Physician	Treat symptomatically. In case of inhalation of decomposition products in a fire, symptoms may be delayed. Contact poison treatment center immediately if large quantities have been ingested or inhaled. The exposed person may need to be under medical surveillance for up to 48 hours.
Specific Treatments	No specific treatment(s).

5. Fire-fighting measures

Suitable extinguishing media	Dry chemicals, water spray, foam or carbon dioxide. Spray containers with water to keep cool and avoid rupture due to pressure buildup.
Unsuitable extinguishing media	High pressure water jet.
Specific hazards arising from the chemical	Burning releases oxides of carbon and nitrogen, isocyanate vapors and traces of hydrogen cyanide. Fiberglass fabric will not burn but may smoke. See also Section 10.

National Fire Protection Association (USA):

Labeling:	No data available.
Hazardous Thermal Decomposition Products	Irritating or toxic substances may be emitted upon burning or decomposition, as above. See Section 10 for additional information.
Special Protective Actions for Fire Fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire water runoff should be contained and not discharged into sewers, drains or the soil. Material will not support combustion.
Special Protective Equipment for Fire Fighters	Fire Fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode during the attack phase of firefighting operations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unauthorized persons away. Provide adequate ventilation and avoid breathing vapors. Put on appropriate personal protective equipment (see Section 8). If spilled in an enclosed area, ventilate area or use SCBA.
Methods and materials for containment and cleaning up	Stop leak if possible without risk. Move containers from spill area. Absorb spilled material with vermiculite, dry sand or earth, put into containers and dispose of via a licensed waste disposal contractor if material has not cured. If possible, soak materials with water and allow material to cure while lightly covered. Cover any remaining material with wet, absorbent material. Allow to sit about one hour. Transfer absorbent to containers and cover lightly (evolution of CO_2). Do not allow runoff into sewers or water sources. Cured material is non-hazardous. Decontamination solution (if required): 8-10% sodium carbonate and 2% liquid soap mixed in water.
Environmental precautions	Avoid dispersal of material and runoff from contact with soil, waterways, drains and/or sewers.

7. Handling and storage

Precautions for safe handling/Personal hygiene	Use appropriate personal protective equipment as per Section 8. Keep in the original container or an approved alternative; keep containers tightly closed when not in use. Do not reuse containers. Eating, drinking and/or smoking should be prohibited where this material is being used. Workers should remove contaminated clothing/protective equipment and wash hands and face and before entering eating areas and eating, drinking and/or smoking.
Conditions for safe storage, including any incompatibilities	Store in sealed original containers, or approved alternatives, when not in use in a dry, well-ventilated area. Protect containers from direct sunlight in a dry, cool and well ventilated area. Do not allow to freeze or exceed 400°F (~204°C). Do not open individual foil packages prematurely as the material will cure due to ambient humidity. Do not reuse containers.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient	CAS#	Exposure Limits (ACGIH-TWA or ACGIH-STEL)
Fiberglass Cloth	65997-17-3	No data available.
Polyisocyanate (based on MDI)	67815-87-6	TWA: 5 mg/m^3 (8 hours). IDLH Level: 10 mg/m^3. Mean MDI exposures of less than 0.003 ppm appear to have no chronic or acute effect on pulmonary function.
Diphenylmethane- diisocyanate, isomers and homologues	9016-87-9	STEL: 0.07 mg/m^3 (as NCO, 15 minutes) TWA: 0.02 mg/m^3 (as NCO, 8 hours)
Chopped Fiberglass	65997-17-3	OSHA PEL: 15 mg/m^3 ACGIH-TWA: 5 mg/m^3
Titanium Dioxide	13463-67-7	15 mg/m^3

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to any airborne contaminants. If working in enclosed spaces, provide additional local ventilation. Eyewash fountains and safety showers are recommended, as well as good laboratory procedures and care.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety eyewear and face shields appropriate for the work being performed should be used. Ordinarily, this means a minimum of safety eyewear or splash goggles.

Skin protection

Hand protection

Chemical-resistant (impervious) gloves (such as nitrile rubber of .35mm thickness or similar) should be worn when handling this material. Contaminated gloves should be disposed of properly.

Other

Chemically resistant long-sleeved shirts and long pants or lab coats are recommended. Contaminated clothing should be washed separately from other clothes before reuse. Footwear appropriate for the work being performed should be worn and cleaned carefully if contaminated, before reuse.

Respiratory protection

If necessary, a properly-fitted vapor mask/respirator complying with an approved standard or SCBA should be used.

General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and Chemical Properties

Appearance

Physical state Solid.

Form Pre-impregnated carbon cloth composite.

Color Buff white.

Odor Slight.

Odor threshold 0.39 ppm.

pH Not available.

Melting point/freezing point >800°C/0 °C

Boiling point 694 °F (368 °C)

Flash Point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit – lower (%) Not available.

Flammability limit – upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density	1.14
Solubility(ies)	
Solubility (water)	Insoluble, material cures when exposed to water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC content	None.

10. Stability and reactivity

Reactivity	Exothermic reactions can occur with amines or alcohols. Reacts with water, forming CO2, which risks bursting closed containers.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	See "Reactivity" above for cautions.
Conditions to avoid	High temperatures greater than 400°F. Note that the material will cure if exposed to water or ambient humidity.
Incompatible materials	Strong amines and alcohols.
Hazardous decomposition products	None, when handled properly. Thermal decomposition may produce smoke, oxides of carbon and nitrogen, isocyanate vapors and traces of hydrogen cyanide.

11. Toxicological information

Acute toxicity

Product/Ingredient	LC_{50} Inhalation	LD_{50} Oral (Rat)	LD_{50} Dermal (Rabbit)
Fiberglass Fabric	N/A	N/A	N/A
Polyisocyanate	1.5 mg/l*	>2,000mg/kg	>9,400mg/kg
Diphenylmethane-diisocyanate, isomers and homologues	0.31 mg/l (4 hours)*	>10,000 mg/kg	>9,400mg/kg
Chopped Fiberglass	N/A	N/A	N/A
Titanium Dioxide	N/A	10,000 mg/kg	N/A

*Note: Substance was tested in a particle size distribution different than as offered on the market and in which it can be reasonably expected to be used in this application. A reduced classification for acute inhalation toxicity is therefore appropriate.

Skin corrosion/irritation	Skin irritation-Category 2.
Serious eye damage/eye irritation	Eye irritation-Category 2.
Respiratory or skin sensitization	
Respiratory sensitization	May cause respiratory sensitization.
Skin sensitization	Unlikely to cause skin sensitization.
Germ cell mutagenicity	No specific data.
Carcinogenicity	No specific data.
Teratogenicity	No effects shown.
Genotoxicity	No effects shown.
Reproductive toxicity	No effects shown.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	May cause damage to organs.
Aspiration hazard	No specific data.
Information on likely routes of exposure	Eyes, skin, inhalation and ingestion

Delayed, immediate and chronic effects from short and long term exposure
Some persons may become sensitized after chronic inhalation or skin contact and may exhibit reactions when exposed.

12. Ecological information

Toxicity, Persistence and degradability

Material is not inherently degradable and hydrolyzes rapidly in water. Material does not meet the criteria of acute aquatic toxicity and has there is no evidence of chronic aquatic toxicity.

Product/Ingredient	LC_{50} 96 Hours (Fish)	EC_{50} 24 Hours (Daphnia)	IC_{50} 96 Hours (Bacteria)
Fiberglass Fabric	N/A	N/A	N/A
Polyisocyanate	>100 mg/l	83 mg/l	N/A
Diphenylmethane-diisocyanate, isomers and homologues	24 mg/l	75 mg/L	N/A
Chopped Fiberglass	N/A	N/A	N/A
Titanium Dioxide	N/A	N/A	N/A

Bioaccumulative potential

Bioaccumulation is not expected as material hydrolyzes rapidly in water.

Ingredient	$LogP_{OW}$	BCF	Potential
Polyisocyanate	N/A	N/A	N/A
Diphenylmethane- diisocyanate, isomers and homologues	N/A	<14	Low

Mobility in Soil (soil/water partition coefficient-K_{OC}):

Material is not expected to be mobile in soil. Material hydrolyzes rapidly with any exposure to water/humidity and becomes non-hazardous after curing.

Other adverse effects

Other information is not available. No ingredients meet the classification criteria as PBT or vPvB.

13. Disposal considerations

Disposal instructions

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate. See Section 8 for recommendations on the use of personal protective equipment.

Empty bag precautions

After opening, a small amount of residual resin material is present on the inside of the sealed pouches. This material will cure in an hour or so from the ambient humidity. Once the material has cured it poses no known hazard. Dispose of in accordance with local regulations.

Unused material

Unused material should be allowed to cure in the ambient humidity. This takes an hour or so. Once the material is cured it can be handled and poses no known hazard. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated. Proper shipping name: LIQUID, CONTAINS ISOZCYANATES, N.O.S. Not regulated in shipments of less than 33,750 kg (74,500 lbs.)

IATA

Not regulated.

IMDG

Not regulated.

Environmental hazards

Marine pollutant

Yes.

Hazardous Substance (USA)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	Not listed.
SARA 311/312 Hazardous chemical	Yes
SARA 313 (TRI reporting)	Not Regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not Regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

International and US Inventory Lists

Canada Inventory (DSL)	All components listed or exempt.	**EU-ELINCS**	Not listed.*
Canada Inventory (NDSL)	Not listed.*	**EU-EINECS**	Listed or exempt
US Toxic Substances Control Act (TSCA)	All components listed or exempt.		
Other	Not determined, no additional information is available.		

***Note:** There is no listing on the public inventory, no information is available or the component has not been reviewed.

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

Borosilicate glass fiber roving (CAS 65997-17-3)
Diphenylmethane diisocyanate (CAS 26447-40-5)
Titanium dioxide (CAS 13463-67-7)

US. Massachusetts RTK - Substance List

Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Titanium dioxide (CAS 13463-67-7)

US. Rhode Island RTK

Titanium dioxide (CAS 13463-67-7)

US. California Proposition 65

Not listed. Titanium Dioxide is a CA Proposition 65 chemical if airborne and respirable. It is not listed if not airborne and remains bound in a product matrix, as in this application.

16. Other information, including date of preparation or last revision

Issue date	05-May-2015
Revision date	05-May-2015
Revision No.	01

HMIS Ratings		**NFPA ratings**	
Health:	3	**Health:**	2
Flammability:	1	**Flammability:**	1
Physical hazard:	1	**Physical hazard:**	1

Disclaimer

Osmose Utilities Services, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The information herein is given in good faith but no warranty, expressed or implied, is made, and Osmose Utilities Services, Inc. expressly disclaims liability from reliance on such information.

MATERIAL SAFETY DATA SHEET
WOLMANIZED® HEAVY DUTY™ PRESSURE-TREATED POLES WITH ET® ADDITIVE
September 1, 2009

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Wolmanized® Heavy Duty™ Pressure-Treated Poles with ET® Additive
General Use: Treated Wood Products

MANUFACTURER:
WOOD TREATERS, LLC
PO BOX 41604
JACKSONVILLE, FL 32203

EMERGENCY TELEPHONE NUMBERS:
904-358-2507, 800-330-7283

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	PERCENT	CAS #	EXPOSURE LIMITS (mg/m^3)		
			OSHA-PEL	ACGIH-TLV	ACGIH-STEL
Chromic Acid	<2*	7738-94-5	(as Cr) 0.1 (Ceiling)	0.05	None
Arsenic Acid	<2*	7778-39-4	(as As)0.01	0.01	None
Copper Oxide	<2*	1317-38-0	(as Cu) 1.0 (dusts/mists)	1.0 (dusts/mists)	None
**Wood Dust			15.0 (softwood)	5.0 (softwood)	15.0 (STEL)

**Based upon 0.6 pounds of CCA per cubic foot of wood. Actual retention may vary slightly due to differences in wood stock and treatment retention levels.*
***A state-run OSHA program may have more stringent limits for wood dust and/or PNOR.*

3. HAZARDS IDENTIFICATION

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING)

Inhalation: Airborne treated or untreated wood dust may cause nose, throat or lung irritation. Various species of untreated wood dust can elicit allergic respiratory response in sensitized persons.
Eye Contact: Treated or untreated wood dust may cause mechanical irritation.
Skin Contact: Handling wood may result in skin exposure to splinters. Prolonged and/or repeated contact with treated or untreated wood dust may result in mild irritation. Various species of untreated wood dust can elicit allergic type skin irritation in sensitized persons.
Ingestion: Not anticipated to occur. A single ingestion of a very large dose of treated wood dust may require immediate medical attention.
Chronic Wood Dust (treated or untreated) Effects: Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation.

4. FIRST AID MEASURES

Inhalation: Remove from wood dust exposure. If breathing has stopped, administer artificial respiration. Seek medical aid if symptoms persist.
Eye Contact: Gently flush any particles from the eyes with large amounts of water for at least 15 minutes. DO NOT RUB THE EYES. Seek medical aid if irritation persists.
Skin Contact: Rinse wood dust off with water. DO NOT RUB. Once the skin is free of the wood dust, wash thoroughly with soap and water. Seek medical aid if severe irritation develops.
Ingestion: Rinse the victim's mouth out with water. Do not induce vomiting. If symptoms develop, call a physician or poison center at (800) 837-0496 (Outside the US call 1-404-616-9000).
One ounce of treated wood dust per 10 pounds of body weight ingested may cause acute arsenic intoxication.

5. FIRE FIGHTING MEASURES

Flash Point	NA	**Lower Explosive Limit**	NA
Auto-ignition	NA	**Upper Explosive Limit**	NA

Extinguishing Agents: Not applicable
Fire-Fighting Procedures: Fire from a separate fuel source may be intense enough to cause thermal decomposition releasing toxic fumes and/or gases. Wear complete fire service protective equipment, including full-face NIOSH/NFPA – approved self-containing breathing apparatus.
Fire and Explosion Hazard:Avo id generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. High airborne levels of wood dust may burn rapidly in the air when exposed to an ignition source.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Not applicable.
Waste Disposal: See Section 13.
Other: Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Nonsparking tools should be used.

7. HANDLING AND STORAGE

Storage Conditions: Protect from physical damage. Maintain good housekeeping. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Caution: DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Whenever possible, sawing or machining treated or untreated wood should be performed outdoors to avoid accumulations of airborne wood dust. Wash hands thoroughly before eating, drinking, using tobacco products, and/or using restrooms.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: None normally required. When sawing or cutting treated or untreated wood, wear a NIOSH approved N95 or better dust mask.
Eye Protection: Wear safety glasses with side shields or safety goggles when sawing or cutting.
Skin/Foot Protection: Wear leather or comparable gloves to prevent splinters. Wear long sleeve shirt, pants and steel toed shoes when handling treated or untreated wood.
Ventilation: Saw, cut or machine wood outdoors or in well ventilated areas. Due to the explosive potential of dust when suspended in air, precautions should be taken when sawing, sanding, or machining wood or wood products to prevent sparks or other ignition sources. If required, use wet methods and/or explosion suppression systems to reduce generation of dust. Local exhaust ventilation is recommended when sawing, sanding, or machining this product. General dilution ventilation is recommended in processing and storage areas. Ventilation should be sufficient to maintain inhalation exposures below OSHA PEL for particulates.
Other Protective Equipment: Wear ear plugs or muffs when using power tools.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Natural to slightly green	**Specific Gravity (Water =1)**	NA
Odor	None	**Boiling Point**	NA
Solubility in Water	NA	**Vapor Density (Air=1)**	NA
Physical State	Solid	**Vapor Pressure**	NA
pH	NA	**Freezing Point**	NA

10. STABILITY AND REACTIVITY

Conditions Contributing to Instability: None known.
Incompatibilities: Strong acids, open flame and oxidizers.
Hazardous Reactions/Decomposition/Combustion Products: Contact with strong acid may release metals. Combustion products may include smoke, oxides of carbon, nitrogen and copper. If the fire is intense enough, some arsenic trioxide may be released into the smoke. The metals will remain in the ash if the wood is burned.
Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

Study Abstracts: In Hawaii, where over 45,000 homes have been built almost entirely of CCA-treated wood, a study was conducted by the Pacific Biomedical Center of the University of Hawaii (the Budy-Rashad study) in 1977 to determine any possible effect on the health of carpenters. The study concluded that exposure to CCA-treated sawdust is not associated with increased risk of total cancer, lung cancer or lymphatic cancer and shows that excess respiratory cancer mortality was not observed in the carpenters.

A study was conducted by the University of Alabama to evaluate the teratogenicity of CCA-impregnated sawdust when exposed to rabbits and mice. Sawdust from CCA-treated wood has been shown not to cause chromosome damage or teratogenic effects in mice fed sawdust nor to cause birth defects in rabbits receiving sawdust applied to their skin.

A series of reports released in 1990 from the Consumer Product Safety Commission (CPSC) assessed the risk of cancer to children playing on CCA-treated wood playground equipment. Seven playground equipment samples were collected. The results of the study indicated the approximate risk of cancer from five samples was less than one in a million, a risk considered negligible. The remaining two samples yielded estimated risks of 3-4 in a million, also considered by CPSC to be a small risk.

Carcinogenic status: IARC, the NTP, OSHA and California Proposition 65 do not consistently distinguish among arsenic or chrome species but list inorganic arsenic and chromium and certain chromium compounds as human carcinogens. Cancers in humans have followed from long term: consumption of Fowler's Solution, a medicinal trivalent arsenical; inhalations and skin contact with inorganic trivalent arsenical sheep-dust; the combined inhalation of arsenic trioxide (trivalent arsenical), sulfur dioxide, and other particulates from ore smelting in arsenic trioxide production; and occupational exposure to nonwater-soluble hexavalent chromium.

Carcinogenicity Data: IARC has classified untreated hardwood and hardwood/softwood mix wood dust as a Group I human carcinogen. The wood dust classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures to untreated wood dust. NTP has classified all untreated wood dust as a carcinogen.

12. ECOLOGICAL INFORMATION

Study Abstracts: A technical paper published in the Forest Products Journal (September, 1974) by Levi, Huisingh and Nesbitt described a study conducted to determine if CCA wood preservative in grapevine support posts might be absorbed by the vines, leaves and/or grapes. This study concluded that "... CCA preservatives are bound in wood, are not readily leached and are not concentrated in plants growing close to the treated wood."

The Springborn Laboratories Environmental Sciences Division in 1993 conducted a sediment exposure study using leachate from CCA treated and untreated marine pilings and exposing Ampelisca abdita for a period of 10 days. Survival of the organisms during the 10-day exposure period was the biological endpoint used to establish the effects of exposure. Results indicated that leachate from treated pilings had no adverse effect on organism survival. It was concluded that the primary constituents of the CCA-treated wood piling were not present in the leachate at concentrations which would adversely affect the survival of the organisms.

Arch Wood Protection has conducted tests to evaluate treated wood used in raised vegetable gardens. Vegetables harvested from gardens in raised bed structures built of CCA-treated wood were compared with vegetables grown in untreated raised bed structures and with vegetables purchased at a local grocery store. Testing revealed that all vegetables contained minuscule amounts of each element in CCA. In some cases, the levels of metals were actually

12. ECOLOGICAL INFORMATION CONT'D

higher in the vegetables grown in untreated bins, and in one case the store-purchased vegetable had the highest level of arsenic. The report concluded that there was "no uptake of the metal constituents into the vegetables."

The Food and Drug Administration's (FDA) "Market Basket Survey" has consistently shown that arsenic in tomatoes is below the analytical level of detection despite the increased usage of arsenically-treated wood for tomato stakes. Moreover, even though CCA-treated wood has been increasingly used in applications such as cattle bunks and stalls and poultry brooders for the last ten years, the FDA survey has shown a decrease in the arsenic content of dairy, meat and poultry products.

A study funded in part by the National Oceanic and Atmospheric Administration (NOAA) and prepared by the Marine Resources Division of the South Carolina Department of Natural Resources in 1995 measured the impact of wood preservative leachate from docks in an estuarine environment. Copper, chromium, arsenic, and polynuclear aromatic hydrocarbons (PAHs) were measured in composite samples of sediments and naturally occurring oyster populations from creeks with high densities of docks, and from nearby reference creeks with no docks. Sediments from all but one site had metal and total PAH concentrations which were below levels reported to cause biological effects, and the oysters showed no significant difference in their physiological condition. Bioassays were also conducted on four common estuarine species and hatchery-reared oysters. The results suggest that wood preservative leachates from dock pilings have no acutely toxic effects on these common species, nor do they affect the survival or growth of juvenile oysters over a six-week period. In some cases, metal leachates may accumulate in sediments and oysters immediately adjacent to pilings, but do not appear to become concentrated in sediments or oysters elsewhere in the same creeks.

13. DISPOSAL CONSIDERATIONS

Disposal Guidance: DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Dispose of in accordance with local, state and federal regulations. This product is exempted as a hazardous waste under any sections of the RCRA regulations as long as the product is being utilized for its intended end use as stated in 40 CFR 261.4 (b) (9). State run hazardous waste programs may be more stringent.

14. TRANSPORT INFORMATION

DOT Hazardous Material Classification: This material is not regulated as a hazardous material by the DOT.

15. REGULATORY INFORMATION

RCRA (40 CFR 261): DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Dispose of in accordance with local, state and federal regulations. This product is exempted as a hazardous waste under any sections of the RCRA regulations as long as the product is being utilized for its intended end use as stated in 40 CFR 261.4 (b) (9). Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Check local and state regulations, as they may be more stringent. State run hazardous waste programs may be more stringent.
OSHA (29 CFR 1910.1200): This product is regulated under the Hazard Communication Standard.
California Proposition 65: This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (This statement issued in accordance with California Proposition 65).
NFPA: Refer to NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, for safe handling.

ABBREVIATIONS

OSHA	Occupational Safety and Health Administration	**TLV**	Threshold Limit Value
NFPA	National Fire Protection Association	**STEL**	Short-Term Exposure Limit
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act	**RCRA**	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	**ACGIH**	American Conference of Governmental Industrial Hygienists
SARA	Superfund Authorization and Reauthorization Act	**NIOSH**	National Institute of Occupational Safety and Health
PEL	Permissible Exposure Limit	**TSCA**	Toxic Substances Control Act
DOT	Department of Transportation	**IARC**	International Agency for Research on Cancer
NTP	National Toxicology Program	**CAS**	Chemical Abstracts Service
CFR	Code of Federal Regulations	**mg/m3**	Milligrams per cubic meter
CWA	Clean Water Act	**CAA**	Clean Air Act

NOTICE: While the information and recommendations set forth herein are believed to be accurate as of the date hereof this company makes no guarantee or warranty, expressed or implied, as to the accuracy, reliability, or completeness of the information.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name:
Polywater® J Lubricant

Product ID numbers: J-27, J-35, J-55, J-99, J-110, J-128, J-640, J-DRUM
J-XXX (Where XXX is the package code.)

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Cable and duct lubrication.

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

Polywater Europe BV
Zuidhaven 9-11 Unit B2
4761 CR Zevenbergen
Netherlands
Tel: +31 (0)10 2330578
Email: sds@ polywater.com

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

This product contains no reportable hazardous components according to US Federal regulations.

Classification according to Regulation (EC) No 1272/2008

This product is not classified as dangerous according to EC criteria.

2.2 Label elements

Pictograms: None required.

Hazard Statements: None required.

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

This product contains no reportable hazardous components under OSHA 29 CFR 1910.1200 (2012), Canada HPR (SOR/2015-17; WHMIS 2015), and European Regulation (EC) No 1272/2008.

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Flush eyes with a large quantity of water for 15 minutes. If irritation continues, seek medical attention.

Skin Contact: If skin becomes irritated, wash area thoroughly with soap and water. If irritation continues, seek medical attention.

Inhalation (Breathing): No first aid expected to be required. Not an inhalation hazard.

Ingestion (Swallowing): No first aid expected to be required. If difficulties arise, contact a physician.

4.2 Most important symptoms and effects, both acute and delayed

Aside from information above, no additional symptoms and effects are anticipated.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Does not apply.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition and by-products:

High temperature steam, potentially carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Sealed container can build up pressure when exposed to high heat. Cool containers with water.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Lubricant is extremely slippery. It should be washed, swept, or squeegeed from floor using wet mops.

6.2 Environmental precautions:

Outside, spills should be covered with sand, dirt, gravel or calcium chloride.

6.3 Methods materials for containment and cleaning up:

Oxidizing agents, such as household bleach, can be used to eliminate the slippery character.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Avoid spills and clean them up immediately when they occur. Product is very slippery. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Keep product containers closed when not in use.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

None

8.2 Exposure controls

Respiratory protection:

Normal ventilation is adequate.

Protective gloves:

For repeated or prolonged skin contact, the use of impermeable gloves is recommended to prevent drying and possible irritation.

Eye protection:

Safety glasses recommended.

9. Physical and Chemical

9.1 Information of basic physical and chemical properties

Appearance:	An opaque, cream-colored, stringy gel with a faint characteristic odor.
Odor threshold:	Not Available
pH:	7.5 to 9.0
Freezing point:	~ 32°F (0°C)
Boiling point:	~ 212°F (100°C)
Flash point:	None
Evaporation rate:	Not available
Flammability (solid, gas):	Product is not flammable
Upper/lower flammability or explosive limits:	Does not apply
Vapor pressure:	18mm Hg @ 72°F (22°C)
Vapor density (Air = 1):	0.9 – 1.1
Specific gravity (H_2O = 1):	1.0
Solubility in water:	Dilutes
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Does not apply
Decomposition temperature:	Not available
Viscosity:	25,000 – 40,000 cps. @ 10 rpm.

9.2 Other Information

Volatiles (Weight %):	>95%
VOC Content:	10 g/l

10. Stability and Reactivity

10.1 Reactivity:

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

None known.

10.4 Conditions to avoid:

None known.

10.5 Incompatible materials :

Avoid materials that react with water.

10.6 Hazardous decomposition products:

Carbon dioxide, carbon monoxide.

11. Toxicological Information

11.1 Information on toxicological effects:
Acute toxicity

Eye contact:

Direct eye contact may cause eye irritation. This irritation is minimal and expected to be transient.

Skin contact:

This product has low skin irritation potential. There is no dermal toxicity hazard.

Irritation and Sensitization Potential:

This product has low skin irritation potential. It is not a sensitizer.

Inhalation (Breathing):

No inhalation hazard expected with water vapor.

Ingestion:

Very low ingestion hazard.
Based on ingredients, LD_{50} (rat) is estimated to be well over 50 g/kg.

Aspiration hazard

Not an aspiration hazard.

Chronic Exposure:

Reproductive Toxicity:	Not Available
Mutagenicity:	Not Available
Teratogenicity:	Not Available
Toxicologically Synergistic Products:	Not Available
Carcinogenic Status:	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.

12. Ecological Information

12.1 Ecotoxicity:	No information available.
12.2 Persistence and degradability:	No information available.
12.3 Bioaccumulation potential:	No information available
12.4 Mobility in soil:	No information available.
12.5 Results of PBT and vPvB Assessment:	This product is not, nor does it contain a substance that is a PBT or vPvB.
12.6 Other adverse effects:	None known.

13. Disposal Considerations

Dispose of product in accordance with National and Local Regulations.

14. Transport Information

UN Number:	Not Listed
UN Proper shipping name:	Not Applicable
Transport hazard class(es):	Not Applicable
Packing group:	Not Applicable
Environmental hazards:	None known
Special precautions:	None known
TDG:	Not Regulated
ICAO/IATA-DGR:	Not Regulated
IMDG:	Not Regulated
ADR/RID:	Not Regulated

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

USA Federal and State
All components are listed on the TSCA inventory.

Hazard Categories for SARA Section 311/312 Reporting	Acute	Chronic	Fire	Pressure	Reactive
	No	No	No	No	No

Components	CERCLA/SARA Sec 302 Hazardous Substance RQ	CERCLA/SARA Sec 302 EHS TPQ	SARA Sec. 313 Toxic Release

Components are not affected by these Superfund regulations.

NFPA Ratings: Health: 0
Fire: 0
Reactivity: 0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

California Proposition 65
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm or has been assessed to be below OEHHA Safe Harbor exposure levels required for labeling.

European Union
Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list ≥ 0.1% SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Canada
All components are listed on the DSL inventory.
This product has been classified according to the hazard criteria of the CPR.

Australia
All components are listed on the AICS.
Not considered hazardous according to criteria of NOHSC Australia.

15.2 Chemical Safety Assessment
No chemical safety assessment has been carried out for the mixture by the supplier.

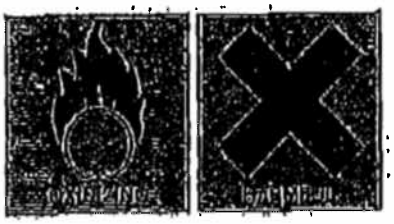
16. Other Information

Abbreviations and acronyms:
OSHA = Occupational Safety and Health Administration
CLP = Classification, Labeling and Packaging Regulation
STOT = Specific Target Organ Toxicity
LD_{50} = Median Lethal Dose
DNEL = Derived No Effect Level
ACGIH = American Conference of Governmental Industrial Hygienists
TSCA = Toxic Substances Control Act (USA)
DSL = Domestic Substances List (Canada)
AICS = Australian Inventory of Chemical Substances

Revision Date:	September 24, 2018
Revision Number:	8
Supersedes:	July 31, 2017
Other:	Not Applicable
Indication of Changes:	Section 15 updated; additional California Proposition 65 information. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

Safety data for potassium nitrate



Click here for data on potassium nitrate in student-friendly format from the HSci project

Glossary of terms on this data sheet

The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the Web sites of many chemical suppliers.

General

Synonyms: colle-bo, niter, nitre, saltpetre, saltpeter, vicknite, nitric acid potassium salt
Molecular formula: KNO_3
CAS No: 7757-79-1
EC No: 231-818-8

Physical data

Appearance: colourless crystals or white powder
Melting point: 334 C
Boiling point: ca. 400 C (decomposes)
Vapour density:
Vapour pressure:
Density ($g\ cm^{-3}$): 2.11
Flash point:
Explosion limits:
Autoignition temperature:
Water solubility: appreciable

Stability

Stable. Strong oxidizer - contact with combustible material may cause fire. Incompatible with combustible materials, strong reducing agents.

Toxicology

Harmful if swallowed. May cause reproductive disorders.

Toxicity data
(The meaning of any abbreviations which appear in this section is given here.)
ORL-RBT LD50 1901 mg kg^{-1}
ORL-RAT LD50 3750 mg kg^{-1}

Risk phrases
(The meaning of any risk phrases which appear in this section is given here.)
R8 R22 R36 R37 R38.

Transport information

(The meaning of any UN Hazard codes which appear in this section is given here.)
UN No 1486. IMDG class 5.1, Packing group III. EMS No: 5.1-08.

Personal protection

Safety glasses.

Safety phrases
(The meaning of any safety phrases which appear in this section is given here.)
S7 S16 S17 S26 S36 S41.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

This information was last updated on August 22, 2005. We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse, or accuracy. We have not verified the information, and cannot guarantee that it is up-to-date.

Note also that the information on the PTCL Safety web site, where this page was hosted, has been copied onto many other sites, often without permission. If you have any doubts about the veracity of the information that you are viewing, or have any queries, please check the URL that your web browser displays for this page. If the URL begins "http://msds.chem.ox.ac.uk/" the page is maintained by the Safety Officer in Physical Chemistry at Oxford University. If not, this page is a copy made by some other person and we have no responsibility for it.

MSDS

MSDS No: 30
Rev Date: 5/18/10
Rev No: 3

1 MATERIAL SAFETY DATA SHEET

Product Name:	**POWERFOAM™ / TRIGGERFOAM™**
Description:	Polyurethane foam filler, insulating foam, backing foam, penetration sealant
Supplier:	Powers Fasteners, Inc. 2 Powers Lane, Brewster, NY 10509
Customer Service:	800-524-3244
Emergency Phone:	**(CHEMTREC) Within USA: (800) 424-9300; Outside USA: 01 (703) 527-3887**

2 INGREDIENTS

	CAS Number		ACGIH TWA	OSHA PEL
Polymethylene polyphenyl isocyanate	9016-87-9	(as MDI)	0.005 ppm	0.02ppm
Dimethyl ether	115-10-6		1000ppm*	NE
Propane	74-98-6		1000ppm*	1000ppm
Isobutane	75-28-5		1000ppm*	NE

*Note: The ACGIH TLV listed above is for Dimethyl ether is an AIHA WEEL. The ACGIH TLVVs listed above for Propane and Isobutane are as *Aliphatic hydrocarbon gases*

This product is classified as hazardous per OSHA regulations (29CFR 1910-1200).

Abbreviations: NE= Not established

3 SAFE USAGE RECOMMENDATIONS

Ventilation:	Avoid breathing vapors or mist. Use with adequate ventilation, either natural or mechanical. Sensitized individuals shoud avoid using this product.
Eye Protection:	Avoid eye contact. Safety goggles recommended. Wear safety glasses with side shields as a minimum, as product can stick to eyes.
Skin Protection:	Avoid skin contact. Wear impermeable gloves. Product can adhere to skin and cause a rash or sentisization.
Respiratory Protection:	Vapor may cause irritation of the breathing tract and sensitization. Use in a well-ventillated area.
Notice:	For professional use. Keep away from children.

4 EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Immediately flush eyes with clean water for 15 minutes and call a physician.
Skin:	Wash with soap and water. Launder clothing before reuse. Seek medical attention if any symptoms develop.
Inhalation:	If breathing becomes uncomfortable or asthma-like symptoms develop, discontinue use and move to fresh air. Contact physician if symptoms persist.
Ingestion:	Immediately rinse mouth with water and call a physician. Drink 1-2 glasses of water. Do not induce vomitting unless directed by a physian.
Other:	Contact a physician if there is any question about the seriousness of the exposure.

5 HEALTH HAZARD INFORMATION

Hazards:	Direct, prolonged contact with product can cause irritation and sensitization to some individuals. Those who develop an allergic response should avoid future use of this product. Contents are pressurized for dispensing and are extremely flammable.

6 PHYSICAL CHARACTERISTICS

Appearance:	Beige foam. Sticky when wet.
Density	1.1
Boiling Point:	NE
(Air=1) Vapor Density:	>1
(Water=1) Evaporation Rate:	NE
Specific Gravity:	1.1
VOC Content:	100 g/l
Odor:	Mild amine-like
Solubility in Water:	Insoluble
pH:	NE

7 FIRE, HAZARD AND REACTIVITY DATA

Flammability:	Extremely Flammable **Flash Point:** 0^0 F (-18^0 C) Boiling Point: NE
Stability:	Stable. Hazardous polymerization will not occur.
Incompatibility:	Strong acids, bases and alcohols.
Unusual fire or Explosion Hazards:	Extremely flammable. Contains pressurized, flammable propellants. Containers can rupture if exposed to fire or direct heat.
Extinguishing Media:	Foam, COx, HCN, Nox
Fire Fighting:	Self-contained breathing equipment recommended.
Hazardous Combustion Products:	CO, NO, HCN, HCL

8 TRANSPORTATION AND REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910. 1200.
HMIS Codes:	Health: 3, Flammability: 3, Physical Hazard: 1. PPE: B Flash Point: 0^0 F (-18^0 C)
US DOT Proper Shipping Name:	Consumer commodity ORM-D
Canadian TDGR Proper Shipping Name:	Consumer commodity (Aerosols) UN1950 Class 2.1, PG: None
IATA/ICAO Proper Shipping Name:	AEROSOLS UN1950 Class 2.1, PG: None
IMO/IMDG Proper Shipping Name:	AEROSOLS UN1950 Class 2.1, PG: None EmS: F-D, S-U
Packing Instructions:	Passenger Aircraft: Y203 or 203 Cargo Aircraft Only: 203
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	Contains Polymethylene polyphenyl isocyanate.

9 STORAGE, CLEAN-UP, AND DISPOSAL

Storage:	Store in a cool, dry place. Keep from freezing and extreme heat, which may shorten shelf life.
Spills:	Follow above personal protective measures. Product will harden upon contact with air and moisture. After hardening, scrape up foam and dispose of in a sealable container.
Waste Disposal:	Dispose of in accordance with federal, state and local regulations.
EPA Waste Codes:	D001, D003 (aerosol cans)

The information and recommendations provided herin are based on information available to us at the time of preparation. We make no other warranty, expressed or implied, as to its correctness, completeness, or as to the results and reliance of the information.

Powers FASTENERS

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP POWERHOUSE AERO DZ

Material number : 000000000000028201

Manufacturer or supplier's details

Company : Zep Inc.

Address : 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318

Telephone : 404-352-1680

Emergency telephone numbers

For SDS Information	:	Compliance Services 1-877-428-9937
For a Medical Emergency	:	877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency	:	CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	colourless
Odour	characteristic

GHS Classification

Gases under pressure : Liquefied gas
Skin irritation : Category 2
Eye irritation : Category 2A

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P251 Do not pierce or burn, even after use.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water

for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
P412 Do not expose to temperatures exceeding 50 °C/ 122 °F.

Potential Health Effects

Carcinogenicity:

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	Confirmed animal carcinogen with unknown relevance to humans 2-butoxyethanol 111-76-2
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
ethanol	64-17-5	>= 10 - < 20
butane	106-97-8	>= 1 - < 5
2-butoxyethanol	111-76-2	>= 1 - < 5
2-aminoethanol	141-43-5	>= 1 - < 5
propan-2-ol	67-63-0	>= 1 - < 5
propane	74-98-6	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.

		Wash off immediately with plenty of water for at least 15 minutes. If on clothes, remove clothes.
In case of eye contact	:	Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. If in eyes, rinse with water for 15 minutes.
If swallowed	:	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray jet Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Smoke Nitrogen oxides (NOx)
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Evacuate personnel to safe areas. Ensure adequate ventilation. Remove all sources of ignition.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform

respective authorities.
Prevent product from entering drains.

Methods and materials for containment and cleaning up : Neutralise with acid.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Always replace cap after use.
Dispose of rinse water in accordance with local and national regulations.
Do not breathe vapours or spray mist.
Avoid exposure - obtain special instructions before use.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
No smoking.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
Keep in a dry, cool and well-ventilated place.

Materials to avoid : Do not store near acids.
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
2-butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm	NIOSH REL

			24 mg/m3	
		TWA	50 ppm 240 mg/m3	OSHA Z-1
		TWA	25 ppm 120 mg/m3	OSHA P0
2-aminoethanol	141-43-5	TWA	3 ppm	ACGIH
		STEL	6 ppm	ACGIH
		TWA	3 ppm 8 mg/m3	NIOSH REL
		ST	6 ppm 15 mg/m3	NIOSH REL
		TWA	3 ppm 6 mg/m3	OSHA Z-1
		STEL	6 ppm 15 mg/m3	OSHA P0
		TWA	3 ppm 8 mg/m3	OSHA P0
propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm 1,225 mg/m3	OSHA P0
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,800 mg/m3	OSHA P0

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-BUTOXYETHANOL	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g	ACGIH BEI
Remarks: Creatinine						
PROPAN-2-OL	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust

ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems. Ensure that eyewash stations and safety showers are close to the workstation location.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Aerosol containing a liquefied gas
Colour	:	colourless
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	10.5 - 11.5
Melting point/freezing point	:	No data available
Boiling point	:	98.3 °C
Flash point	:	< 60 °C
Evaporation rate	:	< 1
Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	0.97 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	not determined

Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Heat of combustion	:	< 20 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Vapours may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	:	Acids Strong oxidizing agents
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Components:

ethanol:

Acute oral toxicity	:	LD50 Oral Rat: 7,060 mg/kg
Acute inhalation toxicity	:	LC50 Rat: 124.7 mg/l Exposure time: 4 h

butane:

Acute inhalation toxicity	:	LC50 Mouse: 1,237 mg/l Exposure time: 2 h
		LC50 Rat: 1,355 mg/l

2-aminoethanol:

Acute oral toxicity	:	LD50 Oral Mouse: 700 mg/kg
		LD50 Oral Rat: 1,515 mg/kg
Acute inhalation toxicity	:	LC50 Mouse: > 1.21 mg/l

propan-2-ol:

Acute oral toxicity	:	LD50 Oral Rat: 4,396 mg/kg Method: Calculation method

propane:

Acute inhalation toxicity	:	LC50 Mouse: 1,237 mg/l Exposure time: 2 h
		LC50 Rat: 658 mg/l Exposure time: 4 h
		LC50 Rat: 1,355 mg/l

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

ethanol:
butane:
2-butoxyethanol:
2-aminoethanol:
propan-2-ol:
propane:

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Further information

Product:

Remarks: No data available

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water	:	Remarks: No data available

Components:

butane :

Partition coefficient: n-octanol/water	:	Pow: 2.89

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I

Remarks		Substances This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data available No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
2,2'-iminodiethanol	111-42-2	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
Sudden Release of Pressure Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.
2,2'-iminodiethanol 111-42-2
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
methanol 67-56-1

The components of this product are reported in the following inventories:

TSCA On TSCA Inventory
DSL This product contains one or several components that are not on the Canadian DSL nor NDSL.
AICS Not in compliance with the inventory
NZIoC Not in compliance with the inventory
PICCS Not in compliance with the inventory
IECSC Not in compliance with the inventory

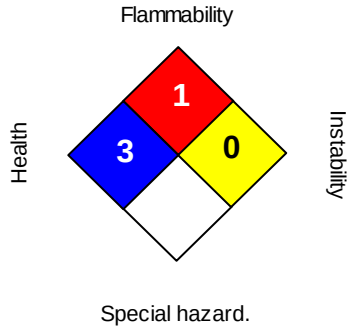
Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms :

Signal word : **Warning:**

Hazard statements : Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation.

Precautionary statements :

Prevention: Wash skin thoroughly after handling. Wear eye protection/ face protection. Wear protective gloves. Do not pierce or burn, even after use.
Response: IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.
Storage: Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Version:	2.1
Revision Date:	08/03/2015
Print Date:	05/10/2016

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Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®,Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®,Rexodan®, Mykal™, and a number of private labeled brands.

SAFETY DATA SHEET

EFFECTIVE May 2013

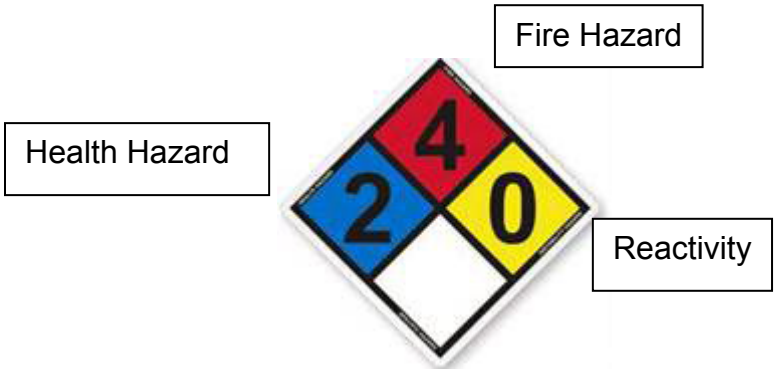
Llame 1-800-776-7263 para la informacion de la seguridad en el espanol

Suburban Propane®

SECTION 1 – PRODUCT & COMPANY IDENTIFICATION

Product Name:	Commercial Odorized Propane
Chemical Name:	**Propane** (C_3H_8)
Chemical Family:	Petroleum Hydrocarbon
Common Names:	Liquefied Petroleum Gas, LP-Gas, LPG, Bottle Gas
Intended Use:	Propane is a liquid fuel
Distributor:	Suburban Propane, L.P. PO Box 206 Whippany, NJ 07981
Emergency Response:	CHEMTREC (800) 424-9300
Additional Safety Information:	Safety Engineering & Environmental (315) 385-4442
Customer Service (24-Hr Phone):	1-800-PROPANE or 1-800-776-7263

SECTION 2 – CHEMICAL HAZARD CLASSIFICATION & WARNING INFORMATION



NFPA CLASSES:
4 - Severe
3 - Serious
2 - Moderate
1 - Slight
0 - Minimal
*Ref. NFPA 704

WHAT IS PROPANE?

Propane (also called LPG-Liquefied Petroleum Gas or LP-Gas) is a liquid fuel stored under pressure. In most systems, propane is vaporized to a gas before it leaves the tank. Propane is highly flammable when mixed with air (oxygen) and can be ignited by many sources, including open flames, smoking materials, electrical sparks, and static electricity. Severe “freeze burn” or frostbite can result if propane liquid comes in contact with your skin.

PROPANE IS A SIMPLE ASPHYXIANT.

PROPANE IS FLAMMABLE.
Flammable Gas under pressure – Keep away from sources of ignition such as heat, sparks or flame. Vapor is heavier than air and may collect in low-lying areas.

SECTION 3 – COMPOSITION/INGREDIENT INFORMATION

COMPONENTS	***CAS NO.***	
PROPANE	74-98-6	*****
PROPYLENE	115-07-1	*****
BUTANES	106-97-8	2.5%
SULPHUR	7704-34-9	185 ppm with no discoloration of Lead Acetate paper******
RESIDUAL MATTER		0.05 ml after boil off of 100 ml liquid sample **
ODORANT(S)	Various	Odor concentration detectable in air of not less than one-fifth of the lower limit of flammability per NFPA 58.
CORROSIVES		Not to exceed #1 grade copper strip test******

****** Combined constituents comprise a minimum 97.45 % of the total weight under Gas Processors Association (GPA) Standard 2140-97.*
*** Based on American Society of Testing and Materials (ASTM) Standard D1835-91.*

SECTION 4 – FIRST AID MEASURES

Eye: Although propane vapor is generally non-irritating, pressurized gas may inflict mechanical injury to the eye. Direct contact with liquid propane can cause freeze burns and resultant swelling of the eye. In case of contact with eyes, remove contact lenses if present and easy to do so, immediately flush with clean, low-pressure water, for a minimum of (15) minutes.

Skin: Contact with liquid propane can cause freeze burns similar to frostbite. Remove saturated clothing, shoes and jewelry immediately. Do not remove clothing that adheres due to freezing. Affected body parts should be gently flushed with or immersed in lukewarm water for 15 minutes. Seek medical attention.

Ingestion: Deemed unlikely.

Inhalation: Simple asphyxiant. Extreme over exposure may cause dizziness, headache, disorientation, excitability, fatigue, coughing, vomiting, anesthesia, unconsciousness and death. Move victim away from source and into fresh air. Seek medical attention - call 911 or Emergency Medical Services. If breathing difficulties develop, qualified personnel may administer oxygen. If breathing or heartbeat cease, artificial respiration or cardiopulmonary resuscitation should be started immediately.

SECTION 5 – FIRE FIGHTING MEASURES

PROPANE IS EXTREMELY FLAMMABLE. Propane will be easily ignited by heat, sparks, or flame. Propane will form explosive mixtures with air. Propane will form explosive mixtures with air. Vapors from liquefied gas are heavier than air and will spread at low levels (along the ground). Vapors may travel to source of ignition and flash back. Containers may explode when heated. Ruptured cylinders may propel/rocket.

Clear and evacuate the area - only properly trained and protected emergency response personnel shall be permitted in the area. Do not extinguish a leaking gas fire unless the leak can be stopped.

Extinguishing Media: Class B fire-extinguishing media such as HALON, C02, or dry chemical can be used. Water spray or fog is appropriate for surrounding areas. Do not extinguish flame until source of gas is shut off. Only those with specialized training should attempt firefighting. For further information, refer to NPGA “Propane Emergencies” Text #7220.

For fires involving tanks:

- Fight fire from maximum distance or use unattended hose
- Cool containers with flooding quantities until well after fire is out
- Do not direct water source at source of leak or safety devices; icing may occur
- Withdraw immediately in case of rising sound from venting safety devices or tank discoloration
- ALWAYS stay away from tanks engulfed in fire
- For massive fire, use unattended hose holders or monitor nozzles; if this is possible withdraw from area and allow fire to burn

SECTION 6 – ACCIDENTAL RELEASE MEASURES

In the event of an accidental release or spill out of doors, these actions should be taken: Evacuate immediate area. Eliminate all possible sources of ignition including heat, sparks and open flame. Provide maximum ventilation and shut off source(s) of leak if possible to do so safely. If cylinder or container is leaking, contact the local fire department or the nearest Suburban Propane supplier. Never enter a vapor (white) cloud.

In the event of an accidental release of propane:

- Eliminate all sources of ignition (no smoking, flares, sparks or flames in immediate area)
- Ground all equipment used for handling product
- Do not touch or walk through the spilled material
- Stop leak source if this can be done without risk
- If possible, position leaking containers so that gas escapes rather than liquid
- Use water spray to reduce vapors or divert vapor cloud and avoid allowing water runoff to contact spilled material
- Do not direct water at spill or source of leak
- Prevent spreading of vapors through sewers, ventilation systems and confined areas
- Isolate area until gas has dispersed

SECTION 7 – HANDLING & STORAGE

Propane systems must be tested and proven leak free prior to use. Refer to National Fire Protection Association (NFPA) 54 National Fuel Gas Code for further instructions.

Keep away from all sources of ignition, including heat, sparks and open flames. Never check for leaks with a lit match or flame. Use an approved leak detector solution or electronic leak detector.

All piping and equipment used for the handling, storage and use of propane must be specifically designed for that purpose. Refer to NFPA 54 National Fuel Gas Code and NFPA 58 Liquefied Petroleum Gas Code.

OSHA 29 CFR 1910.110, DOT 49 CFR 172.700 and NFPA 58 all require that persons handling LP gases be specially trained in proper handling and operating procedures, which must be documented by the employer. Only qualified persons should transport, operate, service and/or install propane systems and containers.

Propane vapor is heavier than air and can collect in low-lying areas, especially in the absence of wind or ventilation. Propane is a simple asphyxiant.

Liquid propane can cause freeze burns, and appropriate personal protective equipment should be used whenever handling this product.

Propane cylinders should always be stored in an approved location with relief valves in direct communication with the vapor space, and with service valves closed and plugged when not in use. Refer to NFPA 58 for details of specific storage requirements.

DO NOT STORE PROPANE CYLINDERS OR CONTAINERS INSIDE BUILDINGS. Make sure regulator remains protected so operation will not be affected by the elements (rain, sleet, snow, ice, mud, debris). Regulator vent should be pointed down and be checked regularly. Customer to make sure building openings are not created and sources of ignition are not installed within the area of propane tanks, regulators, meters or propane equipment.

Empty propane containers retain residue and should be treated as if full. Never drop or damage containers. Damaged or corroded and leaking containers should not be utilized. Contact your local Suburban Propane supplier immediately to report any problems. If container service valve fails to operate properly, discontinue use. Never insert any object into the pressure relief valve. Return unused propane to supplier for proper disposal.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTIVE EQUIPMENT

COMPONENT	THRESHOLD LIMIT VALUE (TLV)	PERMISSABLE EXPOSURE LIMIT (PEL)
PROPANE	NE	1000 ppm
PROPYLENE	NE	NE
BUTANES	NE	800 ppm

Engineering Controls: Provide ventilation in enclosed areas where accumulation of vapors may provide a flammable mixture. Where flammable mixtures may be present, specially designed electrical systems must be used in accordance with NFPA 70 National Electric Code.

Respiratory Protection: For general use no protection is required. Under emergency conditions, concentrations may be high enough to warrant supplied-air or self-contained breathing apparatus. Under these conditions, a flammable atmosphere is likely and precautions should be taken to avoid ignition.

Eye Protection: Approved safety glasses, goggles, or face shields should be used whenever filling and handling propane containers.

Protective Clothing: To avoid skin contact with liquid propane, approved gloves that are impervious to propane should be worn along with clothing that will provide protection from liquid propane for the expected duration- of exposure.

Other Protective Equipment: Safety shoes are recommended when handling cylinders.

SECTION 9 – CHEMICAL & PHYSICAL PROPERTIES

BOILING POINT: - 44° F	FLASH POINT: -156° F	BULK DENSITY: 4.20 lbs. /gal.
SPECIFIC GRAVITY:	LIQUID: 0.504	VAPOR: 1.50
GAS VOLUME @ ATM. PRESSURE & 60° F (Cu. Ft. gas/gal. Liquid): 36.38		
VAPOR PRESSURE: 208 psig @ 100° F (ASTM) SPECIFIC HEAT of LIQUID: .630 BTU/LB. & 60° F FLAMMABILITY LIMITS (% BY VOLUME IN AIR): L.E.L.: 2.1 U.E.L.: 9.5		
EXPANSION RATIO OF LIQUID TO GAS @ 14.7psia : 1 to 270		
LIQUID BOIL-OFF TO PROPANE VAPOR ABOVE – 44 F°: 100%		

Propane is colorless and odorless.
Propane is very stable.
Polymerization will not occur.
An added odorant gives propane a strong unpleasant smell. Information regarding the effectiveness or intensity of odorants is set forth below.

Propane is Odorized: Propane smells like rotten eggs, a skunk's spray, or a dead animal. Some people may have difficulty smelling propane due to their age (older people have a less sensitive sense of smell); a medical condition; or the effects of medication, alcohol, tobacco, or drugs. Consider purchasing a propane gas detector as an additional measure of security.

Odor Fade: Odor fade is an unintended reduction in the concentration of the odor of propane, making it more difficult to smell. Although rare, several situations can cause odor fade:

- The presence of air, water, or rust in a propane tank or cylinder
- The passage of leaking propane through soil
- The exposure to building materials, masonry or fabrics

Since there is a possibility of odor fade or problems with your sense of smell, you should respond immediately to even a faint odor of gas.

To learn what propane smells like, Customers unfamiliar with that smell should call Suburban's Safety Information Request Center at 1-888-223-0029 and order the pamphlets called "Important Propane Safety Information for You and Your Family" and/or an expansive "Propane Safety" booklet to obtain a Scratch and Sniff Test, free of charge. Pamphlets can also be purchased through Propane Education & Research Council (PERC) at 1-866-905-1075 or www.propanecatalog.com.

SECTION 10 – STABILITY & REACTIVITY

Chemical Stability - Propane is very stable at normal temperature and storage conditions

Possible Hazardous Reactions - Polymerization reported not to occur

Conditions to Avoid - Keep away from heat, fire, flames, sparks, and other sources of ignition

Incompatible Materials - Strong oxidizing agents, acids, bases, ignition sources and heat

Hazardous Decomposition Products - Normal combustion products of propane are carbon dioxide, nitrogen and water vapor. Incomplete combustion of propane can produce carbon monoxide (CO), a toxic gas, and various aldehydes; an eye and nose irritant. These can be produced both by gas appliances and internal combustion engines. Propane fired equipment may emit carbon monoxide in its flue gasses.

SECTION 11 – TOXICOLOGICAL INFORMATION

COMPONENT	THRESHOLD LIMIT VALUE (TLV)	PERMISSABLE EXPOSURE LIMIT (PEL)
PROPANE	NE	1000 ppm
PROPYLENE	NE	NE
BUTANES	NE	800 ppm

Potential Health Effects: Routes of exposure, through inhalation and contact with eyes and or skin. Exposure to skin and eyes can result in frostbite – a cold burn. Inhalation hazard related to the asphyxiant properties of propane that can reduce oxygen levels, and create suffocation hazard. Ingestion is an unlikely route of exposure.

Propane is not listed in the latest edition of the National Toxicology Program Annual Report on Carcinogens, has not been found to be a potential carcinogen in the latest edition of the International Agency for Research on Cancer Monographs, and has not been identified as a carcinogen by OSHA.

The Food and Drug Administration (FDA) has said propane is GRAS (generally recognized as safe) as a direct human food ingredient when used as a propellant, aerating agent and gas.

SECTION 12 – ECOLOGICAL INFORMATION

Upon contact with the environment, propane is expected to volatilize or dissipate.

Upon review of USC Title 15 Chapter 23 Section 2601 commonly known as Toxic Substance Control Act (TSCA), Propane has not been found to be a chemical whose manufacture, processing, distribution in commerce, use, or disposal to present an unreasonable risk of injury to health or the environment.

Propane does not contain any Class 1 or Class 2 ozone-depleting chemicals. Propane is not a listed marine pollutant.

SECTION 13 – DISPOSAL CONSIDERATIONS

Empty propane containers retain residue and should be treated as if full. Never drop or damage containers. Damaged or corroded and leaking containers should not be utilized. Contact your local Suburban Propane supplier immediately to report any problems. If container service valve fails to operate properly, discontinue use. Never insert any object into the pressure relief valve. Return unused propane to supplier for proper disposal.

SECTION 14 – TRANSPORT INFORMATION

UN Number:	UN 1075
Proper Shipping Name:	Liquid Petroleum Gas
Transport Hazard Class:	2.1 Flammable Gases
Emergency Contact for Shipping:	CHEMTREC (800) 424-9300

SECTION 15– REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety & Health Administration (OSHA)
29 CFR 1910.1200 Hazard Communication Standard
29 CFR 1910.110 Storage and Handling of Liquefied Petroleum Gas
29 CFR 1910.119 Process Safety Management of Highly Hazardous Chemicals

Environmental Protection Agency (EPA)
CERCLA Reportable Quantity (RQ): None

Toxic Substance Control Act (TSCA)
Propane is listed on the TSCA inventory

California Proposition 65
This material does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

Warning: Chemicals known to the state of California to cause cancer, birth defects or other reproductive harm are created by the combustion of propane.

SECTION 16 – OTHER INFORMATION

This Safety Data Sheet, issued May 2013, was prepared by Safety Engineering & Environmental Services of Suburban Propane and supersedes all earlier versions.

For further information write to:
SUBURBAN PROPANE, L.P.
Safety Engineering & Environmental Services
PO Box 4833
Syracuse, NY 13221
(315) 385-4442

FURTHER DISCLAIMER: The information contained in this document is believed to be correct at the time of writing. NO WARRANTY OF MERCHANTABILITY, SUITABILITY FOR ANY SPECIFIC PURPOSE, OR ANY ASPECT REGARDING ITS INTENDED USE OR THE EXPECTED RESULTS TO BE OBTAINED IS EXPRESSED OR IMPLIED. This information and the propane furnished is done so on condition that the person(s) receiving them shall make their own determination as to the suitability of the propane for any specific purpose, and that they assume any and all risks associated with its storage and use.

CONSUMER SAFETY INFORMATION
We urge you to visit www.suburbanpropane.com for Consumer Safety Information prepared by the Propane Education & Research Council (PERC). Pamphlets called "Important Propane Safety information for You and Your Family," "Important Propane Safety Information for Users of Small Cylinders" (including cylinder transportation, storage and inspection procedures), an expansive "Propane Safety" booklet, weather/natural disaster information, and Suburban's Safety Data Sheet (SDS) may be read and downloaded online. These documents are also available free of charge by calling Suburban at 1-888-223-0029 and PERC pamphlets containing a Scratch and Sniff Test of propane odor can be purchased at 1-866-905-1075 or www.propanecatalog.com.

SAFETY DATA SHEET

1. Identification

Product identifier	**Propane**
Other means of identification	
SDS number	WC002
Product code	UN1075
Recommended use	Portable fuel.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer/Supplier	Worthington Cylinder Corporation
Address	300 E. Breed St., Chilton, WI 5301 United States
Contact person	Ann Stiefvater
E-mail address	Ann.Stiefvater@worthingtonindustries.com
Telephone number	1-920-849-1740
Emergency telephone number	1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Not classified.	
OSHA defined hazards	Simple asphyxiant	
Label elements		

Signal word	Danger
Hazard statement	Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection.
Response	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	Protect from sunlight. Store in a well-ventilated place.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.

Ethane	74-84-0	0-7
Butane	106-97-8	0-2.5

Additives

Chemical name	CAS number	%
Ethyl Mercaptan	75-08-1	<0.005

Composition comments Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin contact Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.

Eye contact Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Most important symptoms/effects, acute and delayed Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.

Indication of immediate medical attention and special treatment needed Exposure may aggravate pre-existing respiratory disorders. Provide general supportive measures and treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical powder. Carbon dioxide (CO2). Water fog. Foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Extremely flammable gas. Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out.

Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. All equipment used when handling the product must be grounded. Do not breathe gas. Avoid prolonged exposure. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store at temperatures not exceeding 49°C/120°F. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Protect cylinders from damage. Stored containers should be periodically checked for general condition and leakage. Store in original tightly closed container. Keep container tightly closed. Store in a well-ventilated place. Use care in handling/storage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	25 mg/m3 10 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Propylene (CAS 115-07-1)	TWA	500 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**

Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Neoprene or nitrile gloves are recommended.
Skin protection	
Other	Wear protective clothing appropriate for the risk of exposure.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance	Colorless gas.
Physical state	Gas (Liquefied).
Form	Compressed liquefied gas.
Color	Colorless.
Odor	Rotten egg.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not available.
Relative density	0.504 (liquid) 1.5 (vapor) (air=1) @ 15°C / 60°F
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Explosive properties	Not explosive.
Molecular weight	45 g/mol

Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens. Nitrates.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	1355 mg/l
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Propylene (CAS 115-07-1) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

12. Ecological information

Ecotoxicity The product is not expected to be hazardous to the environment.

Persistence and degradability The product is readily biodegradable.

Bioaccumulative potential The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Propane	1.77
Propylene (CAS 115-07-1)	1.77

Mobility in soil Not relevant, due to the form of the product.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.

Local disposal regulations Dispose of in accordance with local regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 °F
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose in accordance with all applicable regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

- **UN number** UN1075
- **UN proper shipping name** Petroleum Gases, Liquified
- **Transport hazard class(es)**
  - **Class** 2.1
  - **Subsidiary risk** -
  - **Label(s)** 2.1
- **Packing group** Not applicable.
- **Environmental hazards**
  - **Marine pollutant** No
- **Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.
- **Special provisions** 19, T50
- **Packaging exceptions** 306
- **Packaging non bulk** 304
- **Packaging bulk** 314, 315

IATA

- **UN number** UN1075
- **UN proper shipping name** Petroleum Gases, Liquified
- **Transport hazard class(es)**
  - **Class** 2.1
  - **Subsidiary risk** -
- **Packing group** Not applicable.
- **Environmental hazards** No

EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
General information	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butane (CAS 106-97-8)	LISTED
Ethyl Mercaptan (CAS 75-08-1)	LISTED
Propane (CAS 74-98-6)	LISTED
Propylene (CAS 115-07-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	0-10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Safe Drinking Water Act Not regulated.

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-May-2014

Revision date 09-August-2016

Version # 02

Further information The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

HMIS® ratings

Health: 1
Flammability: 4
Physical hazard: 1

NFPA ratings

Disclaimer	All information in this Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.
This SDS contains revisions in the following section(s):	1 - 16

Date: 15 October 2007
Supercedes: 15 November 2004

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PURELL® INSTANT HAND SANITIZER**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	62
Isopropanol	67-63-0	400 ppm	400 ppm	<5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Ethyl Alcohol	64-17-5	MA 1; NJ 1S; PA 1; CN 2
Isopropanol	67-63-0	MA 1; NJ 1S; CN 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 3 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

Purell is a trademark of Warner-Lambert Company LLC

5. FIRE FIGHTING MEASURES:

NFPA:	Health 0 Fire 3 Reactivity 0
Flashpoint °F/°C (PMCC method):	86.36°F/30.2°C
Unusual Fire and Explosion Hazards:	Product is flammable due to alcohol content.
Special Fire Fighting Procedures:	None known.
Extinguishing Media:	X Water Fog X Alcohol Foam X CO_2 X Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

Avoid contact with ignition sources since product is flammable. Absorb onto inert material and dispose in appropriate manner. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Keep away from fire or flame. Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear liquid, citrus fragrance
pH (undiluted):	4.5 – 9.5
VOC , %:	65

10. STABILITY AND REACTIVITY:

Stable/Non reactive product. Avoid ignition sources.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

Characteristic hazardous waste-flammable liquid. Dispose according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Hazardous by transport regulations. When transported by Ground and Rail, this product typically is shipped as Consumer Commodity ORM-D. When transported by air, this product is typically shipped as Consumer Commodity or Alcohols N.O.S. depending on package size. When transported by ocean, this product is typically shipped as Limited Quantities. Refer to current regulations for exact requirements.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

Date: 26 January 2005
Supercedes: 1 October 2004

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PURELL® SANITIZING WIPES**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1,000 ppm	1,000 ppm	<20
Isopropanol	67-63-0	TWA: 400 ppm	TWA: 400 ppm	<5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Propylene Glycol	57-55-6	PA 1; CN 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 1 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

Purell is a trademark of Warner-Lambert Company LLC

5. FIRE FIGHTING MEASURES:

NFPA: Health 0 Fire 1 Reactivity 0

Flashpoint °F/°C (PMCC method): 104°F/ 40°C (liquid)
Unusual Fire and Explosion Hazards: Product is flammable due to alcohol content.
Special Fire Fighting Procedures: None known.
Extinguishing Media: X Water Fog X Alcohol Foam X CO_2 X Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

Avoid contact with ignition sources since product is flammable. Absorb onto inert material and dispose in appropriate manner. Water clean up and rinse. CAUTIO1 – : I/ / CAUS(S/IPP(RY SUR) AC(S.

7. HANDLING AND STORAGE:

Keep away from fire or flame. Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear colorless liquid, lemon odor, impregnated towel
pH (undiluted):	4.0 – 7.5
VOC, %:	1R

10. STABILITY AND REACTIVITY:

Stable/Non reactive product. Avoid ignition sources.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

Characteristic hazardous waste-flammable liquid. Dispose according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Hazardous by transport regulations. When transported by Ground and Rail, this product typically is shipped as Consumer Commodity ORM-D. When transported by air, this product is typically shipped as Consumer Commodity or Alcohols N.O.S. depending on package size. When transported by ocean, this product is typically shipped as Limited Quantities. Refer to current regulations for exact requirements.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).
Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

SAFETY DATA SHEET

Revision Date 19-Feb-2019 **Version** 16

1. IDENTIFICATION

Product identifier
Product Name PX BLUE THREADLOCKER 36 ML.

Other means of identification
Product Code 24240

Recommended use of the chemical and restrictions on use
Recommended Use Adhesive
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502

May Also Be Distributed by:
ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

24-hour emergency phone number
Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Signal word
Warning

Causes skin irritation
Causes serious eye irritation
Suspected of causing cancer
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure

Appearance Blue **Physical state** Liquid **Odor** Mild

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
DIMETHYLBENZYL HYDROPEROXIDE	80-15-9	1 - 5
TITANIUM DIOXIDE	13463-67-7	0.1 - 1
CUMENE	98-82-8	0.1 - 1

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin contact	IF ON SKIN:. Wash skin with soap and water. If skin irritation persists, call a physician. Take off contaminated clothing and wash before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.
Ingestion	IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use personal protective equipment as required.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Peroxides, Reducing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
TITANIUM DIOXIDE 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³ TWA: 2.4 mg/m³ CIB 63 fine TWA: 0.3 mg/m³ CIB 63 ultrafine, including engineered nanoscale
CUMENE 98-82-8	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m³ (vacated) S* S*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m³

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Blue
Odor Mild
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 200 °C / > 392 °F	
Flash point	131 °C / 268 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.01	
Water solubility	Immiscible in water	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	1,100 mPas @20°C (68°F)	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information	
Softening point	No information available
Molecular weight	No information available
VOC Content (%)	<3%
Density	No information available
Bulk density	No information available
SADT (self-accelerating decomposition temperature)	No information available

10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability
Stable under normal conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Peroxides, Reducing agents

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure if inhaled.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	= 382 mg/kg (Rat)	= 0.126 mL/kg (Rabbit)	= 220 ppm (Rat) 4 h
TITANIUM DIOXIDE 13463-67-7	> 10000 mg/kg (Rat)	-	-
CUMENE 98-82-8	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 h = 39000 mg/m³ (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
TITANIUM DIOXIDE 13463-67-7	-	Group 2B	-	X
CUMENE 98-82-8	-	Group 2B	Reasonably Anticipated	X

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Not classifiable as a human carcinogen
NTP (National Toxicology Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 18864 mg/kg
ATEmix (dermal) 54321 mg/kg
ATEmix (inhalation-dust/mist) 24.7 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.377 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical Name	Partition coefficient
CUMENE 98-82-8	3.7

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number Not applicable

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	Toxic Ignitable
CUMENE 98-82-8	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

Proper shipping name: Not regulated

IATA

Proper shipping name: Not regulated

IMDG

Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Not Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
DIMETHYLBENZYL HYDROPEROXIDE - 80-15-9	1.0
SACCHARIN - 81-07-2	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ
CUMENE 98-82-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
TITANIUM DIOXIDE - 13463-67-7	*Carcinogen (airborne, unbound particles of respirable size)
CUMENE - 98-82-8	Carcinogen

• *The asterisked chemical(s) listed are not subject to Proposition 65 because they are not airborne in the finished product

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	X	X	X
SACCHARIN 81-07-2	X	X	X
CUMENE 98-82-8	X	X	X
2-BUTOXYETHANOL 111-76-2	X	X	X
1,4-NAPHTHOQUINONE 130-15-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class

D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 19-Feb-2019

Disclaimer

Illinois Tool Works Inc. believes the information contained in this data sheet is accurate as of the date compiled. However, Illinois Tool Works Inc. makes no warranty, express or implied, as to the accuracy, reliability or completeness

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End of Safety Data Sheet

(1)

MATERIAL SAFETY DATA SHEET
Effective Date: 07/15/03

SECTION I - IDENTIFICATION

MANUFACTURER'S NAME:	FarmSaver.com, LLC
ADDRESS:	PO Box 21365, Seattle, WA 98111
TELEPHONE NUMBER:	800-979-8994

CHEMICAL NAME AND SYNONYMS:	Thiophanate Methyl
TRADE NAME AND SYNONYMS:	Quail-Pro TM 4.6
EPA REG#	48234-12-73220
CAS #	23564-05-8
FORMULA:	C12H14N4O4S2 - [DIMETHYL (1,2-PHENYLENE) BIS (IMINOCARBONOTHIOYL)] BIS [CARBAMATE]

SECTION II - HAZARDOUS INGREDIENTS

CAS #	INGREDIENT	% BY WEIGHT	THRESHOLD LIMIT VALUE
23564-05-8	Thiophanate Dimethyl	46.2%	N/A

SECTION III - PHYSICAL DATA

BOILING POINT (°C):	Ca 100°C
BULK DENSITY:	N/A
VAPOR PRESSURE (MM HG):	NE
%, VOLATILE BY VOL.:	N/A
VAPOR DENSITY (AIR=1):	N/A
SOLUBILITY IN WATER:	Dispersible
COLOR AND ODOR:	Off white-characteristic odor
PHYSICAL STABILITY:	Stable
SPECIFIC GRAVITY (H_2O=1):	1.213 @ 20/21°C

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED):	N/A
FLAMMABLE LIMITS:	N/A
EXTINGUISHING MEDIA:	Water, Foam, CO_2, Dry Chemical, Or Earth Or Sand
SPECIAL FIRE FIGHTING PROTECTIVE EQUIPMENT:	N/A
UNUSUAL FIRE AND EXPLOSION HAZARDS:	N/A

SECTION V - HEALTH HAZARD DATA

ORAL INGESTION:	N/A
EYE CONTACT:	Mild Irritation (TRANSIENT)
SKIN CONTACT:	N/A
SKIN ABSORPTION:	N/A
INHALATION:	N/A

(2)

FIRST AID PROCEDURES

EYES:	Flush with plenty of water for at least 15 minutes. Get medical attention if irritation persists
SKIN:	Flush with soap and water. Contaminated clothing - remove and launder.
INHALATION:	Remove to fresh air.
INGESTION:	Get medical attention. Induce vomiting. Give two glasses of water

SECTION VI - REACTIVITY DATA

STABILITY:	Stable under normal conditions
CONDITIONS TO AVOID:	None
INCOMPATIBILITY (MATERIALS TO AVOID):	NE
HAZARDOUS DECOMPOSITION PRODUCTS:	N/A
HAZARDOUS POLYMERIZATION:	N/A
CONDITIONS TO AVOID:	None

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb with sand or inert material. Sweep or scoop up and remove. Flush with water.

DISPOSAL METHODS: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

SECTION VIII - SPECIAL PROTECTION INFORMATION

VENTILATION:	Use with adequate ventilation
RESPIRATORY PROTECTION:	Not Required - use normal safety precautions
PROTECTIVE CLOTHING:	Wear protective clothing, which prevents skin contact.
EYE PROTECTION:	Not Required - use normal safety precautions.
OTHER PROTECTIVE EQUIPMENT:	

SECTION IX - SPECIAL PRECAUTIONS/COMMENTS

Precautions to be taken in handling and storing. Store in a cool, dry place in closed containers. Avoid breathing dust. Avoid direct or prolonged contact with skin and eyes. Wash hands thoroughly after handling. Do not eat, drink, or smoke in work area. Keep out of reach of children and animals. Read label carefully before use. Avoid contaminating water. Do not reuse containers. Open dumping is prohibited.

The information herein is given in good faith but no warranty, express or implied, is made.

Safety Data Sheet: QUROX

Supercedes Date 01/16/2013 **Issuing Date** 08/15/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name QUROX
Recommended use Solvent-borne coatings
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 0638
Chemical nature Solvent blend
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color off-white - Light brown **Physical state** Liquid **Odor** Solvent

GHS Classification

Physical Hazards
None

Health Hazard

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2B

Other hazards
None

Labeling
Signal Word
WARNING

Hazard statements
H315 - Causes skin irritation
H320 - Causes eye irritation

Precautionary Statements
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P280 - Wear protective gloves, protective clothing and eye protection.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P362 - Take off contaminated clothing and wash before reuse.
P332 + P313 - If skin irritation occurs, get medical attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists, get medical attention.

41 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %
Vinyl acrylic polymer	25067-01-0	30-60
Tannic acid	1401-55-4	3-7
Dipropylene glycol mono methyl ether	34590-94-8	0.1-1.0

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.
Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use.
Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately.

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point > 201 °F / > 94 °C **Method** Seta closed cup
Flammability Limits in Air %: No information available. **Upper:** No data available **Lower:** No data available
Suitable Extinguishing Media
Foam. Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical
Material can create slippery conditions. Dried polymer films are capable of burning.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, NOHSC (approved or equivalent) and full protective gear.

NFPA	**Health** 2	**Flammability** 1	**Instability** 0
HMIS -	**Health** 2	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.
Storage Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Storage Temperature	**Minimum**	36 °F / 2 °C		**Maximum**	120 °F / 49 °C		
Storage Conditions	**Indoor**	X	**Outdoor**	**Heated**		**Refrigerated**	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines
Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment
Eye/Face Protection Safety glasses with side-shields.
Skin Protection Wear suitable protective clothing, Impervious gloves.
Respiratory Protection In case of inadequate ventilation wear respiratory protection.
General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	**Viscosity**	Semi-viscous
Color	off-white - Light brown	**Odor**	Solvent
Odor Threshold	Not applicable	**Appearance**	Opaque
pH	1.3	**Specific Gravity**	1.229
Bulk Density (lb/cu ft)	10.25	**Evaporation Rate**	0.30 (Butyl acetate=1)
Percent Volatile (Volume)	62.2	**VOC Content (%)**	1.5
VOC Content (g/L)	18	**Vapor Pressure**	13.92 mmHg @ 70°F
Vapor Density	0.6	**Solubility**	Soluble
n-Octanol/Water Partition	No data available	**Melting Point/Range**	No data available
Decomposition Temperature	No data available	**Boiling Point/Range**	180 °F / 82 °C
Flammability (solid, gas)	No data available		
Flash Point	> 201 °F / > 94 °C	**Method**	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	No information available	**Upper:** No data available **Lower:** No data available	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	None known.
Incompatible Products	Strong oxidizing agents, Reducing agents, Bases, Hydrogen fluoride.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Carbon oxides, Nitrogen oxides (NOx), Ammonia, Chlorine, Hydrogen chloride gas, Carbonyl halides.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information — No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available
Principle Route of Exposure	Skin contact, Eye contact.
Primary Routes of Entry	Skin contact, Skin Absorption.
Acute Effects:	
Eyes	Causes eye irritation.
Skin	Causes skin irritation.
Inhalation	Low hazard for usual industrial or commercial handling.
Ingestion	Ingestion may cause irritation to mucous membranes.
Chronic Toxicity	No information available.
Target Organ Effects	Central nervous system, Respiratory system, Skin, Eyes.
Aggravated Medical Conditions	Neurological disorders, Respiratory system, Skin disorders.

Component Information

Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Tannic acid 1401-55-4	= 2260 mg/kg (Rat)	no data available	No data available	No data available	No data available
Dipropylene glycol mono methyl ether 34590-94-8	= 5230 mg/kg (Rat)	= 9500 mg/kg (Rabbit)	No data available	No data available	No data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Dipropylene glycol mono methyl ether 34590-94-8	No data available	No data available	No data available	No data available	Central nervous system; Eyes; Respiratory system

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Tannic acid 1401-55-4	not applicable	Group 3	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information — No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficien
Dipropylene glycol mono methyl ether	No information available.	LC50 > 10000 mg/L Pimephales promelas 96 h	No information available	1919: 48 h Daphnia magna mg/L LC50	-0.064

Persistence and Degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal	Dispose of in accordance with local regulations.
Container Disposal	Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	CAS No.	Weight %	SARA 313 - Threshold Values
Dipropylene glycol mono methyl ether	34590-94-8	0.1-1.0	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

16. OTHER INFORMATION

Prepared By	Adrienne McKee
Supercedes Date	01/16/2013
Issuing Date	08/15/2017
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

CERTIFIED LABS, DIV. OF NCH CORP.assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

SAFETY DATA SHEET

RESOLVE® High Traffic Area Carpet Foam

HEALTH • HYGIENE • HOME

1. Product and company identification

Product name : RESOLVE® High Traffic Area Carpet Foam

Distributed by : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: : **http://www.rbnainfo.com**

Product use : Fabric Care

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : D8040582 v 7.0

Formulation #: : 8125757 v 1.0

UPC Code / Sizes : can 22 FL. OZ. (1 LB. 5,9 OZ.) 623 g brimful capacity: can 790 cc

2. Hazards identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Liquefied gas

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.

Precautionary statements

2. Hazards identification

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

Response : Not applicable.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Not applicable.

Supplemental label elements : Use only in well ventilated areas
Keep children and pets off carpet till dry

Hazards not otherwise classified : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
butane	1 - 3	106-97-8
propane	1 - 3	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

4. First aid measures

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
butane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 800 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 6/2013).** STEL: 1000 ppm 15 minutes.
isobutane	**NIOSH REL (United States, 10/2013).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 6/2013).** STEL: 1000 ppm 15 minutes.
propane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

9. Physical and chemical properties

Appearance

Physical state : Liquid. [Aerosol.]

Color : White.

Odor : Pleasant.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: -104.4°C (-155.9°F)(propellant)

Evaporation rate : Not available.

Flammability (solid, gas) : Extremely flammable.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Aerosol product

Type of aerosol : Foam

Heat of combustion : 2.051 kJ/g

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin : Non-irritant to skin.

Eyes : Slightly irritating to the eyes.

Respiratory : Based on available data, the classification criteria are not met.

Sensitization

Not available.

Conclusion/Summary

Skin : Mild irritant

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

11. Toxicological information

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
ORAL (LD50) Calculated value for the mixture	> 2000 mg/kg

12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
butane	2.89	-	low
isobutane	2.8	-	low
propane	1.09	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	AEROSOLS	2.1	-		Limited quantity
TDG Classification	UN1950	AEROSOLS	2.1	-		Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2. 17 (Class 2). Limited quantity
Mexico Classification	UN1950	AEROSOLS	2.1	-		Limited quantity
IMDG Class	UN1950	AEROSOLS	2.1	-		Limited quantity
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		Limited quantity

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: α-hexylcinnamaldehyde; 2-(4-tert-butylbenzyl)propionaldehyde; undec-10-enal; anisaldehyde; 3-p-cumenyl-2-methylpropionaldehyde; 4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde; 7-hydroxycitronellal; benzaldehyde; 2-benzylideneheptanal; phenylacetaldehyde

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 311: ammonia

Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

15. Regulatory information

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
butane	2.5 - 5	Yes.	Yes.	No.	No.	No.
propane	1 - 2.5	Yes.	Yes.	No.	No.	No.

State regulations

Massachusetts : The following components are listed: BUTANE; PROPANE

New York : None of the components are listed.

New Jersey : The following components are listed: BUTANE; PROPANE

Pennsylvania : The following components are listed: BUTANE; PROPANE

Canada

WHMIS (Canada) : Class B-5: Flammable aerosol.

Canadian lists

Canadian NPRI : The following components are listed: Butane (all isomers); Propane

CEPA Toxic substances : None of the components are listed.

Canada inventory : Not applicable

Label elements

Signal word : CAUTION

Hazard statements : MAY CAUSE EYE IRRITATION. CONTENTS UNDER PRESSURE.

Precautionary measures : Keep out of the reach of children. Do not get in eyes. Avoid contact with eyes, skin and clothing. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120 °F. Use only with adequate ventilation. Do not swallow. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		4
Physical hazards		1
Personal protection		B

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Date of issue : 13/11/2017

Date of previous issue : 19/04/2017

Version : 6

Prepared by : Reckitt Benckiser India Ltd
Plot No 48
Sector - 32
Institutional Area
Gurgaon, Haryana
India - 122001

16. Other information

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

RB is a member of the CSPA Product Care Product Stewardship Program.

Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

SAFETY DATA SHEET

Lysol Brand III Kills 99.9% of Viruses & Bacteria** Disinfectant Max Cover Mist Lavender Fields Scent

HEALTH · HYGIENE · HOME

1. Product and company identification

Product name : Lysol Brand III Kills 99.9% of Viruses & Bacteria** Disinfectant Max Cover Mist Lavender Fields Scent

Distributed by : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: : **http://www.rbnainfo.com**

Product use : Disinfectant.
Consumer use

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : D8214281 v5.0

Formulation #: : e0029-079A / 8211367 v1.0

EPA ID No. : 777-127

UPC Code / Sizes : 15 oz and 12.5 oz Aerosol Can

2. Hazards identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 2
GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :

Signal word : Warning

2. Hazards identification

Hazard statements : Flammable aerosol.
Pressurized container: may burst if heated.

Precautionary statements

General : Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

Response : Not applicable.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Not applicable.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Ethyl alcohol	30 - 60	64-17-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

4. First aid measures

Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5. Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Conditions for safe storage, including any incompatibilities : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
Ethyl alcohol	**ACGIH TLV (United States, 4/2014).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

8. Exposure controls/personal protection

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. Physical and chemical properties

Appearance

Physical state : Liquid. [Liquefied compressed gas.]

Color : Clear.

Odor : Characteristic.

Odor threshold : Not available.

pH : 10.8 to 11.8 [Conc. (% w/w): 100%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: 25.6°C (78.1°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.85

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) :

Aerosol product

Type of aerosol : Spray

Heat of combustion : 17.99 kJ/g

Ignition distance : <45.72 cm

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : Do not use with other products.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethyl alcohol	LC50 Inhalation Vapor LD50 Oral	Rat Rat	124700 mg/m³ 7 g/kg	4 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethyl alcohol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
*Lysol Brand III Kills 99.9% of Viruses & Bacteria** Disinfectant Max Cover Mist Lavender Fields Scent	Eyes - Mild irritant	Rabbit	-	-	-

Conclusion/Summary

Skin : Slightly irritating to the skin. * Information is based on toxicity test result of the concentrate of a similar product.

Eyes : Non-irritating to the eyes. *Information is based on toxicity test result of the concentrate of a similar product.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethyl alcohol	-	1	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

11. Toxicological information

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Ethyl alcohol	Acute EC50 17.921 mg/l Marine water Acute EC50 2000 µg/l Fresh water Acute LC50 25500 µg/l Marine water Acute LC50 42000 µg/l Fresh water Chronic NOEC 4.995 mg/l Marine water Chronic NOEC 0.375 ul/L Fresh water	Algae - Ulva pertusa Daphnia - Daphnia magna Crustaceans - Artemia franciscana - Larvae Fish - Oncorhynchus mykiss Algae - Ulva pertusa Fish - Gambusia holbrooki - Larvae	96 hours 48 hours 48 hours 4 days 96 hours 12 weeks

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Ethyl alcohol	-0.35	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
TDG Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
Mexico Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IMDG Class	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		See DG List

Special precautions for user :

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: 2-methylpropan-2-ol

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 311: ammonia

Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

15. Regulatory information

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Ethyl alcohol	30 - 60	Yes.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: ETHYL ALCOHOL; BUTANE; PROPANE

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL; BUTANE; PROPANE

Pennsylvania : The following components are listed: DENATURED ALCOHOL; BUTANE; PROPANE

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class B-5: Flammable aerosol.
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: Ethanol; Butane (all isomers); Propane

CEPA Toxic substances : None of the components are listed.

Canada inventory : At least one component is not listed in DSL but all such components are listed in NDSL.

Label elements

Signal word: : CAUTION

Hazard statements : Causes moderate eye irritation

Precautionary measures : Avoid contact with eyes, skin and clothing.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Keep out of the reach of children.
Flammable. CONTENTS UNDER PRESSURE. Keep away from heat, sparks and flame. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 130 °F.

Hazard statements :

Flammable

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	3
Physical hazards	0
Personal protection	B

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

NFPA (30B) aerosol Flammability Level 1

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Date of issue : 10/03/2017

Date of previous issue : 18/09/2015.

Version : 5

16. Other information

Prepared by : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

Revision comments : Change in EPA number from 777-99 to 777-127.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

CSPA Product Care®

RB is a member of the CSPA Product Care Product Stewardship Program.

Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

SAFETY DATA SHEET

Lysol Max Cover Disinfectant Mist - Garden After Rain

HEALTH • HYGIENE • HOME

1. Product and company identification

Product name : Lysol Max Cover Disinfectant Mist - Garden After Rain

Distributed by : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: : **http://www.rbnainfo.com**

Product use : Disinfectant.
Consumer use

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : D8214495 v5.0

Formulation #: : e0029-0058B / 8211366 v1.0

EPA ID No. : 777-127

UPC Code / Sizes : 15oz and 12 oz Aerosol Can

2. Hazards identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 2
GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :

2. Hazards identification

Signal word : Warning

Hazard statements : Flammable aerosol.
Contains gas under pressure; may explode if heated.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Wash hands thoroughly after handling.

Response : Not applicable.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Not applicable.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
ethanol	30 - 60	64-17-5
butane	2.5 - 5	106-97-8
propane	1 - 2.5	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

4. First aid measures

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

5. Fire-fighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Conditions for safe storage, including any incompatibilities : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
ethanol	**ACGIH TLV (United States, 3/2015).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.
butane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 800 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 6/2013).** STEL: 1000 ppm 15 minutes.
propane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.

8. Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

9. Physical and chemical properties

Appearance

Physical state : Liquid. [Liquefied compressed gas.]

Color : Clear.

Odor : Characteristic.

Odor threshold : Not available.

pH : 10.8 to 11.8 [Conc. (% w/w): 100%]

Melting point : Not available.

Boiling point : Not available.

9. Physical and chemical properties

Flash point : Closed cup: 25.6°C (78.1°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.85

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 17.99 kJ/g

Ignition distance : <45.72 cm

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : Do not use with other products.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-
butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethyl alcohol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
*Lysol Brand III Kills 99.9% of Viruses & Bacteria** Disinfectant Max Cover Mist Garden After the Rain Scent	Eyes - Non-irritating to the eyes.	Rabbit	<1	72 hours	4 days
	Skin - Primary dermal irritation index (PDII)	Rabbit	0.3	4 hours	72 hours

Conclusion/Summary

Skin : Slightly irritating to the skin. * Information is based on toxicity test result of the concentrate of a similar product.

Eyes : Non-irritating to the eyes. *Information is based on toxicity test result of the concentrate of a similar product.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethanol	-	1	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water Acute EC50 2000 µg/l Fresh water Acute LC50 25500 µg/l Marine water Acute LC50 42000 µg/l Fresh water Chronic NOEC 4.995 mg/l Marine water Chronic NOEC 100 ul/L Fresh water	Algae - Ulva pertusa Daphnia - Daphnia magna Crustaceans - Artemia franciscana - Larvae Fish - Oncorhynchus mykiss Algae - Ulva pertusa Daphnia - Daphnia magna - Neonate	96 hours 48 hours 48 hours 4 days 96 hours 21 days

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ethanol	-0.35	-	low
butane	2.89	-	low
propane	1.09	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity

14. Transport information

TDG Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
Mexico Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IMDG Class	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		See DG List

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: 2-methylpropan-2-ol

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 311: ammonia

Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

15. Regulatory information

Classification : Fire hazard
Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
ethanol	30 - 60	Yes.	No.	No.	Yes.	No.
butane	2.5 - 5	Yes.	Yes.	No.	No.	No.
propane	1 - 2.5	Yes.	Yes.	No.	No.	No.

State regulations

Massachusetts : The following components are listed: ETHYL ALCOHOL; DENATURED ALCOHOL; BUTANE; PROPANE

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL; BUTANE; PROPANE

Pennsylvania : The following components are listed: DENATURED ALCOHOL; ETHANOL; BUTANE; PROPANE

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class B-5: Flammable aerosol.
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: Ethanol; Butane (all isomers); Propane

CEPA Toxic substances : None of the components are listed.

Canada inventory : At least one component is not listed in DSL but all such components are listed in NDSL.

Label elements

Signal word: : CAUTION

Hazard statements : Causes moderate eye irritation

Precautionary measures : Avoid contact with eyes, skin and clothing.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Keep out of the reach of children.
Flammable. CONTENTS UNDER PRESSURE. Keep away from heat, sparks and flame. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 130 °F.

Hazard statements :

Flammable

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		3
Physical hazards		0
Personal protection		B

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

NFPA (30B) aerosol Flammability Level 1

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Date of issue : 22/02/2017

Date of previous issue : 26/01/2016.

Version : 5

16. Other information

Prepared by : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

Revision comments : Change in EPA Registration Number from 777-99 to 777-127.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

CSPA Product Care®

RB is a member of the CSPA Product Care Product Stewardship Program.

RAINBOW TECHNOLOGY CORPORATION
261 Cahaba Valley Parkway
Pelham, Alabama 35124

MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER INFORMATION

MANUFACTURER/DISTRIBUTOR:	Rainbow Technology Corporation (800) 637-6047
CONTACT PERSON:	Larry Joe Steeley, Jr.
EMERGENCY PHONE:	Chem-Tel Inc. (800) 255-3924
TRADE NAME:	Rainbow Contact Cleaner
PRODUCT NUMBER:	4100
ISSUE DATE:	December 5, 2005
REPLACES MSDS DATED:	November 4, 2002

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	%	CAS#	EINECS#
1,2-transdichloroethylene (Trans)	30-90	156-60-5	205-860-2
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	10-50	460-73-1	4191706
Ethyl Hydroxy Propionate	<1	97-64-3	202-598-0
1,1,1,2-Tetrafluoroethane (HFC-134a)	10-20	811-97-2	223770
Carbon dioxide	1-10	124-38-9	

EEC CLASSIFICATION
R20 – Harmful by inhalation.
EEC Harmful – “Xn”
R36/37/38 – Irritating to eyes, respiratory system and skin.
EEC Irritant – “Xi”
R52/53 – Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EEC Environment – “N”

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Transparent, colorless liquid.
IMMEDIATE CONCERNS: Warning! High concentrations of vapor can reduce oxygen available for breathing. Harmful if inhaled. May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products.

POTENTIAL HEALTH EFFECTS

EYES: Substance causes substantial eye irritation.
SKIN: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).
INGESTION: Substance may be harmful if swallowed.
INHALATION: High concentrations in immediate area can displace oxygen and can cause dizziness, unconsciousness, and possibly death with longer exposure. Keep people away from such vapors without self-contained breathing apparatus.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquid plashed in the eye may cause redness, irritation and conjunctivitis.
SKIN: Prolonged exposure causes redness, pain, drying and cracking of the skin.
INGESTION: For large amounts; abdominal pain, nausea and vomiting.
INHALATION: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).
ACUTE TOXICITY: Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result.

SECTION 4 – FIRST AID MEASURES

EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.
SKIN: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

SECTION 4 – FIRST AID MEASURES CONTINUED

INGESTION: If swallowed, gently wipe or rinse the inside of the mouth with water. DO NOT induce vomiting. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Immediately contact a poison control center, emergency room or physician as further treatment may be necessary.
INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: Not Flammable
EXTINGUISING MEDIA: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
FIRE FIGHTING PROCEDURES: Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.
FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic oxides of carbon and corrosive vapors of hydrogen chloride.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain spill with dike to prevent entry into sewers.
LARGE SPILL: If this material is released into a work area, evacuate the area immediately.
GENERAL PROCEDURES: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including vapors, have been removed thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth, gravel, etc. as necessary and place in closed containers for disposal.
SPECIAL PROTECTIVE EQUIPMENT: Only personnel equipped with proper respiratory and skin/eye protection should be permitted in area. See Section 8 for details.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Use with adequate ventilation.
STORAGE: Store away from heat.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:
OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

Chemical Name	OSHA PEL	ACGIH TLV	Supplier OEL
1,2-transdichloroethylene (Trans)	**TWA** NE [1]	200 ppm	NE
	STEL NE	200 ppm	
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	**TWA** None	None	300 ppm
	STEL None	None	
Ethyl Hydroxy Propionate	**TWA** [2]		
	STEL [3]		
1,1,1,2-Tetrafluoroethane (HFC-134a)	**TWA** NE	NE	1,000 ppm [4]

OSHA TABLE COMMENTS:
1. NOT ESTABLISHED
2. NA=NOT APPLICABLE
3. NOT APPLICABLE
4. * (AEL)=Acceptable Exposure Limit as established by the manufacture

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION CONTINUED

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.
SKIN: The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Viton, Solvex, Butyl, Buna, Neoprene.

RESPIRATORY: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER USE PRECAUTIONS: Emergency shower and eyewash facility should be in close proximity.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Faint ethereal odor
APPEARANCE: Clear, Colorless liquid
PERCENT VOLATILE: 100
VAPOR PRESSURE: 17.8 psi at 20 degrees C (68 degrees F)
EVAPORATION RATE: <1 (TCE=1)
SPECIFIC GRAVITY: 1.249 (water=1)
(VOC): 856.5 g/L (non-exempt VOC)

SECTION 10 – STABILITY AND REACTIVITY

STABLE: YES
HAZARDOUS POLYMERIZATION: NO
CONDITIONS TO AVOID: Stable. However, may decompose if heated.
STABILITY: Stable.
POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: When exposed to high temperatures or flames this product may form hydrochloric and hydrofluoric acids-possibly carbonyl halides.
INCOMPATIBLE MATERIALS: Oxidizing agents, alkalies and bases.

SECTION 11 – TOXICOLOGICAL INFORMATION

ACUTE
EYES: Moderately to severely irritating
DERMAL LD50: Mildly to moderately irritating.
ORAL LD50: Slight to very low toxicity.
INHALATION LC50: Slight to very low toxicity.
TERATOGENIC EFFECTS: Test results indicate this compound/mixture is not teratogenic.

SECTION 12 – ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: There is limited information available on the environmental fate and effects of this material. The primary environmental concern for release is the impact on acquatic and terrestrial species. Due care should be taken to avoid the accidental release of the material into the environment.

SECTION 13 – DISPOSAL CONSIDERATIONS

FOR LARGE SPILLS: Contaminated sawdust, vermiculite, or porous surfaces must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility.
GENERAL COMMENTS: Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 – TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)
PROPER SHIPPING NAME: CONSUMER COMMODITY ORM-D
PRIMARY HAZARD CLASS/DIVISION: No classification
UN/NA NUMBER: N/A
PACKING GROUP: N/A

AIR (ICAO/IATA)
PROPER SHIPPING NAME: CONSUMER COMMODITY ORM-D
PRIMARY HAZARD CLASS/DIVISION: 9
UN/NA NUMBER: ID8000
PACKING GROUP: N/A

VESSEL (IMO/IMDG)
PROPER SHIPPING NAME: AEROSOLS IN LIMITED QUANTITIES OF CLASS 2
PRIMARY HAZARD CLASS/DIVISION: 2.2
UN/NA NUMBER: UN1950
PACKING GROUP: N/A
IMDG NOTE: Page 2102

EUROPEAN TRANSPORTATION:
ADR/RID HAZARD CLASSIFICATION: 2.2
ADR/RID ITEM NUMBER: UN1950

SECTION 15 – REGULATORY INFORMATION

UNITED STATES
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)
311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED
FIRE: NO **PRESSURE GENERATING:** YES **REACTIVITY:** NO **ACUTE:** YES **CHRONIC:** YES
TITLE III NOTES: Not listed as an Extremely Hazardous Substance.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)
CERCLA REGULATORY: Releases to air, land, or water which exceed the RQ must be reported to the National Response Center [(800.424.8802] and to your Local Emergency Planning Committee.
CERCLA RQ: Trans-1,2-dichloroethylene is listed in Table 302.4 of 40 CFR Part 302 as a hazardous substance. Reportable Quantity – 1,000 lbs.

EPA
EPA RQ INGREDIENT: trans-1,2-dichloroethylene (#156-60-5)

TSCA (TOXIC SUBSTANCE CONTROL ACT)
TSCA REGULATORY: All chemicals in this product are listed on the TSCA Inventory.

CANADA
WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.
WHMIS CLASS: Class A, Class D2B.

EUROPEAN COMMUNITY
EEC CLASSIFICATION
R20 – Harmful by inhalation.
EEC Harmful – "Xn"
R36/37/38 – Irritating to eyes, respiratory system and skin.
EEC Irritant – "Xi"
R52/53 – Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EEC Environment – "N"

CALIFORNIA PROPOSITION 65: This product does not contain any chemicals known to the State of California to cause cancer.

SECTION 16 – OTHER INFORMATION

HMIS / NFPA RATING
HEALTH: 2
FLAMMABILITY: 2
PHYSICAL HAZARD: 0

The information provided herein was believed to be accurate at the time of preparation and prepared from a compilation of sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

RAINBOW TECHNOLOGY CORPORATION
261 Cahaba Valley Parkway
Pelham, Alabama 35124

MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER INFORMATION

MANUFACTURER/DISTRIBUTOR:	Rainbow Technology Corporation (800) 637-6047
CONTACT PERSON:	Larry Joe Steeley, Jr.
EMERGENCY PHONE # (24 HOURS):	Chem-Tel, Inc. (800) 255-3924
TRADE NAME:	Rainbow Fire Ant Killer, EPA Reg. No. 13283-14
PRODUCT NUMBER:	4480 – 4 oz Bags, 4483 – 6 lb Jar, 4484 – 2 lb Jar
CHEMICAL NAME:	Mixture
CHEMICAL FAMILY:	Mixture
FORMULA:	Granular
ISSUE DATE:	February 10, 2010
REPLACES MSDS DATED:	October 2, 2009

SECTION 2 - HAZARDOUS INGREDIENTS

Chlorpyrifos (CAS # 2921-88-2)	5.0%	TLV: 0.2 mg/m³ (skin)	OSHA PEL – Not Established

SECTION 3 - PHYSICAL DATA

APPEARANCE: Granular	**BULK DENSITY**: 0.514 (32.1 lbs/ft³)
ODOR: Moderate aromatic solvent	**SOLUBILITY IN WATER**: N/A
BOILING POINT: N/A	**PERCENT VOLATILE**: N/A
VAPOR PRESSURE: N/A	**EVAPORATION RATE**: N/A
VAPOR DENSITY: N/A	**MELTING POINT**: N/A

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: None **FLAMMABLE LIMITS**: N/A

FIRE EXTINGUISHING MEDIA: Foam, dry chemical, CO_2 extinguisher or water. Foam is preferred.

SPECIAL FIRE-FIGHTING PROCEDURES: Fire fighters should use positive pressure self-contained breathing apparatus and remove all unprotected persons from the area. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Toxic fumes from burning containers and packaging may cause inhalation hazard. Toxic irritating gasses may be formed above 160°C (320°F).

NFPA RATINGS: Health = 1; Flammability = 0; Reactivity = 0; Special = ND
(Least = 0; Extreme = 4; ND = Not Determined)

SECTION 5 – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Not Determined

PRIMARY ROUTE OF EXPOSURE: Dermal, Oral

EFFECTS OF OVEREXPOSURE: This hazard evaluation is based on data from similar products/materials.

Eye Contact: May cause moderate irritation. Corneal injury is unlikely.

Skin Contact: Single, prolonged exposure is not likely to cause significant irritation.

Dermal Toxicity: Prolonged exposure not likely to result in material being absorbed through the skin in harmful amounts. Absorption LD_{50} > 2,000 mg/kg.

Respiratory/Inhalation: Not likely to be harmful.

Ingestion: Ingestion of large amounts may cause injury.

Systemic and Other Effects: Excessive exposure may produce organophosphate-type cholinesterase inhibition. Signs and symptoms of excessive exposure to the active ingredient may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions. The active ingredient, when tested separately at high doses in animals, produced adrenal effects, but did not cause cancer in animal studies nor birth defects in laboratory animals. In animal studies, the active ingredient has been shown not to interfere with reproduction. Based on a majority of negative data and some equivocal or marginally positive results, the active ingredient is considered to have minimal mutagenic potential.

SECTION 5 – HEALTH HAZARD DATA (continued)

EMERGENCY AND FIRST AID PROCEDURES:

Eye Contact: Immediately flush with plenty of water. Get medical attention if irritation persists.

Skin Contact: Remove contaminated clothing and wash before reuse. Wash affected skin with soap and warm water. Get medical attention if irritation persists.

Inhalation: Remove person to fresh air. Apply artificial respiration if indicated. Contact a physician if warranted.

Ingestion: Call a physician or poison control center immediately.

NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Suggest serum and/or RBC cholinesterase determination. Atropine by intravenous administration is the preferable antidote. Oximes may or may not be therapeutic, but is recommended they not be used in place of atropine. Supportive care. Treatment based on judgement of the physician in response to reactions of the patient.

SECTION 6 - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: High temperatures. Store below 38°C(100°F). Chlorpyrifos undergoes exothermic decomposition at approximately 130°C (266°F) which can lead to higher temperatures and violent decomposition if generated heat is not removed.

INCOMPATIBILITY (Materials to Avoid): Alkaline materials

HAZARDOUS DECOMPOSITION PRODUCTS: If involved in fire: hydrogen chloride, ethyl sulfide, diethyl sulfide, and nitrogen oxides can be formed.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None known

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: This product is toxic to fish and wildlife. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Sweep up material and place into suitable containers for use or proper disposal.

WASTE DISPOSAL METHOD: Partially filled and empty bags may be disposed of by securely wrapping in several layers of newspaper and discarding in trash. Do not reuse any empty bags. Alternatively, material may be disposed of according to local, state, and federal regulations.

SECTION 8 – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Dust mask as needed during application.

VENTILATION: Normal

OTHER PROTECTIVE CLOTHING: Gloves and safety glasses or goggles.

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: *It is a violation of Federal law to use this product in a manner inconsistent with its labeling.* Read entire label before using. Use strictly in accordance with label precautionary statements and directions. Store in clean, dry place. Protect from rupture.

SECTION 10 - REGULATORY INFORMATION

This product contains 5.0% Chlorpyrifos (CAS #2921-88-2). The remaining composition (95.0%) is inert ingredients.

Chlorpyrifos is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chlorpyrifos is found on Subpart Z and all state substances list.

Shipping Classification – Environmentally Hazardous Substance, Solid, N.O.S. (Chlorpyrifos), Marine Pollutant, /9/PGIII/UN3077/

The information provided herein was believed to be accurate at the time of preparation and prepared from a compilation of sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

RAINBOW TECHNOLOGY CORPORATION
261 Cahaba Valley Parkway
Pelham, Alabama 35124

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/DISTRIBUTOR:	Rainbow Technology Corporation (800)637-6047
CONTACT PERSON:	Larry Joe Steeley, Jr.
EMERGENCY PHONE:#(24 HRS.):	Chem-Tel Inc. (800) 255-3924
TRADE NAME:	Rainbow Tick & Mosquito Repellent for FR Clothing
PRODUCT NUMBER:	4507 & 4509
ISSUE DATE:	June 9, 2011
REPLACES MSDS DATED:	March 10, 2010

NFPA RATING

(Scale 0-4)

HEALTH 0
FIRE 1
REACTIVITY 0

SECTION 2 – COMPOSITION/INFORMATION ON COMPONENTS

CAS NO	CHEMICAL NAMES	Percent
52645-53-1	Permethrin	0.50
64742-95-6	Aromatic Petroleum Distillate Xylene Range	<1.00
N/A	Inert Ingredients	>98.0

CHEMICAL CHARACTERIZATION/DESCRIPTION: Permethrin*
*(3-phenoxyphenyl)methyl (+/-) cis/trans 3-(2,2dichloroethenyl)-2,2-dimethyl cyclopropanecarboxylate. Cis/trans ration: min 35% (max. 40%)(+/-) cis and max. 65% (min 60%)(+/-) trans.

SECTION 3 – HAZARD INDENTIFICATION

LABELING: Precautionay Statements: Keep out of Reach of Children. Avoid contact with face, eyes, or skin. Harmful if swallowed. Wash thoroughly after handling and before eating or smoking. Do not use on humans. Do not retreat clothing within 6 weeks unless clothing has been laundered between treatments.

SECTION 4 – FIRST AID MEASURES

First Aid: Emergency Procedures:
If Inhaled: Remove affected person to fresh air. Apply artificial respiration, if indicated.
Skin Contact: Remove contaminated clothing and wash affected areas with soap and water.
Eye Contact: Flush eyes with plenty of water. Call a physician if irritation persists.
If Swallowed: Drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Measures
Water Spray, Carbon dioxide, foam, or dry chemical. Use appropriate extinguishing media for surrounding fire.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions: Eye Protection – safety glasses, goggles, or face shield
Environmental Precautions: None necessary under normal conditions of use.
Measures for Cleaning/Collection: Open windows and doors to ventilate area thoroughly. Allow to discharge safely, avoiding breathing vapors. Soak up residues with an absorbent material.

SECTION 7 – HANDLING AND STORAGE

Do not store where temperature falls below 32 degrees F.

SECTION 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

Personal Protective Equipment:
Respiratory Protection: None
Skin Protection: None
Eye Protection: Safety glasses, goggles or face shield.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	N/A	Specific Gravity (water=1)	0.995
Vapor Pressure (mm Hg):	N/A	Melting Point:	N/A
Vapor Density (AIR = 1):	N/A	Unit Pressure:	N/A
Solubility in Water:	Miscible	Pounds/Gallon:	8.31
Solubility in Oil	Negligible	Flash Point (TTC):	>200 degrees F
Appearance:	Liquid	PH:	6.0-7.0
Odor:	Slight (Solvent)	Auto Ignition Temp. (°C)	N/A
Color:	Milky White		

SECTION 10 – STABILITY AND REACTIVITY

General: This product is considered stable.
Materials to avoid: None
Conditions to avoid: Do not store when temperature exceeds 130 degrees F
Hazardous Decomposition Products (including combustion products): None
Hazardous Polymerization: Will not occur

SECTION 11 – TOXICOLOGICAL INFORMATION

Systems of Overexposure : None
Health Effects of Risk from Exposure: Acute: NE Chronic: NE

SECTION 12 – ECOLOGICAL EFFECTS

None anticipated under normal conditions of use.

SECTION 13 – DISPOSAL CONSIDERATIONS

Replace cap, wrap container in several layers of newspaper, and discard container in trash. Dispose of absorbents in trash. Dispose of all wastes in accordance with Federal, State, and Local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Proper Shipping Name: Insect Repellent/Clothing Treatment
Not Restricted.

SECTION 15 - REGULATORY INFORMATION

TSCA: (toxic Substances Control Act) Regulations, 40CFR710: This product is a pesticide and is exempt from TSCA regulation. CERCLA and SARA Regulations (40CFR355, 370, and 372): This product does not contain chemicals subject to the regulation and reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA, Title III), Section 311, 312 and 313.

SECTION 16 – OTHER INFORMATION

The information provided herein was believed to be accurate at the time of preparation and prepared from a compilation of sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use.

RAINBOW TECHNOLOGY CORPORATION
261 Cahaba Valley Parkway
Pelham, Alabama 35124

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/DISTRIBUTOR:	Rainbow Technology Corporation (800)637-6047
CONTACT PERSON:	Larry Joe Steeley, Jr.
EMERGENCY PHONE:#(24 HRS.):	Chem-Tel Inc. (800) 255-3924
TRADE NAME:	Rainbow Jungle Formula Insect Repellent Towelette
PRODUCT NUMBER:	4508
ISSUE DATE:	September 7, 2010
REPLACES MSDS DATED:	February 26, 2007

SECTION 2 – COMPOSITION/INFORMATION ON COMPONENTS

CAS NO	CHEMICAL NAMES	% by wt	Explosure Limits
134-62-3	N,N Diethyl-m-toluamide (DEET)*	30	Not Established
64-17-5	Ethyl Alcohol	<12	OSHA PEL: 1000 ppm (as 8-hr time-weighted avg) ACGIH-TLV: same
Trade secret	Other Inert Ingredients **	>58	Not Established

* Active Ingredient
** Other inert ingredients are maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identity is withheld because they are considered trade secrets. The hazards associated with the other ingredients are addressed in this document.

SECTION 3 – HAZARD INDENTIFICATION

Emergency Overview – A white liquid, lotion or cream with added fragrance (variable). This product does not present an immediate concern for emergency personnel.

Potential Health Effects
Eyes – May cause moderate irritation.
Skin – Keep away from mucous membranes and abraded skin.
Ingestion – May be harmful if ingested.
Inhalation – High gas, vapor, or mist concentrations may be harmful if inhaled.
Chronic (Carcinogen) – None of the components of this material is listed by IARC, NTP or OSHA as a carcinogen.
Teratogenicity – No data available for this mixture.
Mutagenicity – No data available for this mixture.

SECTION 4 – FIRST AID MEASURES

Eyes – Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician.
Skin – Wash thoroughly after skin contact.
Ingestion – Drink 1 to 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention.
Inhalation – Remove from exposure. If not breathing, give artificial respiration and call a physician. Seek medical attention if medical problems persist.

SECTION 5 – FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: FLASHPOINT >203 degrees F (>95 degrees C) Method: COC
FLAMMABLE LIMITS: LEL Not available UEL Not available
AUTOIGNITION: Not available

SECTION 5 – FIRE FIGHTING MEASURES CONT.

COMBUSTION PRODUCTS: As with other organic materials, combustion will produce carbon monoxide, carbon dioxide and nitrogen oxides.
EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide (CO2), water spray.
FIREFIGHTING INSTRUCTION: Wear self-contained breathing apparatus and protective clothing. Normal firefighting procedures may be used.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Contain spilled material with sand or vermiculite and place in chemical waste container. Prevent runoff from entering drains, sewers, and streams.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, mucous membranes and clothing. Use with adequate ventilation. Wash hands after handling. Since DEET is a good solvent, it is recommended that the formulation be kept away from painted and varnished surfaces, plastics, polymers and rubbers.

STORAGE: This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container tightly closed.

SECTION 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use with adequate ventilation. The use of local mechanical ventilation is recommended whenever this product is used in a confined space or heated above ambient temperature.
PERSONAL PROTECTIVE EQUIPMENT (PPE)
Eyes/Face: Goggles or glasses with side shields
Skin: Clothing should be sufficient to minimize physical contact. Impermeable gloves recommended (i.e., disposable neoprene)
Respiratory: The use of a NIOSH-approved organic vapor respirator is recommended whenever this product is used in a confined space or heated above ambient temperature. Air-purifying respirators must not be used in oxygen-deficient atmospheres.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Initial boiling point = 78 degrees C (ethyl alcohol)	Specific Gravity (water=1)	Approx. 1
Vapor Pressure (mm Hg):	Not Available	Freezing/Melting Point:	Not Available
Vapor Density (AIR = 1):	Not Available	Physical State	Liquid, lotion or cream
Solubility in Water:	Water emulsion	PH	6.5-7.5 @ 1% aqueous solution
Appearance:	White liquid, lotion or cream	Evaporation Rate	<1 (Butyl Acetate = 1)
Odor:	Fragrance added (varies)		

SECTION 10 – STABILITY AND REACTIVITY

STABILITY: Stable
INCOMPATIBILITY: Incompatible with oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS: As with other organic materials, combustion will produce carbon dioxide, carbon monoxide and oxides of nitrogen.
POLMERIZATION: Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

IRRITATION:
Skin – rabbit - 500 mg; slightly irritating
Eye – rabbit – 100 mg; moderately irritation
TOXIC EFFECTS:
Oral – rat
LD50 (female): between 2000 mg/kg and 5000 mg/kg
LD 50 (male) > 5000 mg/kg
Dermal – rat
LD50: > 5000 mg/kg
Inhalation – rate – LC50: > 2000 mg/m3

SECTION 11 – TOXICOLOGICAL INFORMATION CONT.

Other multiple dose toxicity
Skin – guinea pig – No evidence of dermal sensitizer effects.

SECTION 12 – ECOLOGICAL EFFECTS

No data available for this mixture.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal must be in accordance with Federal, State, and Local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

DOT SHIPPING CLASSIFICATION – Not Regulated
DOT HAZARD CLASS – ORM-D
UN NUMBER – Not applicable
DOT HAZARD LABEL – Not applicable
IMO – Not listed

SECTION 15 - REGULATORY INFORMATION

OSHA STATUS – Non-Hazardous **SARA TITLE III** – Not Applicable **CERCLA** – Not Applicable
California Proposition 65 – Ingredients Not Listed

NOTE: This material is an approved pesticide under U.S. EPA's FIFRA and Health Canada requirements.

SECTION 16 – OTHER INFORMATION

HMIS RATING	**NFPA Rating**
Health – 1	Health - 1
Flammability – 1	Flammability - 1
Reactivity – 0	Reactivity - 0
Personal Protection - B	

NOTE: 'B' designates a recommendation of safety glass and protective gloves when handling this material in bulk. This rating is given to materials which have the potential for skin irritation, or which may be harmful if absorbed through the skin.

The information provided herein was believed to be accurate at the time of preparation and prepared from a compilation of sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use.

MATERIAL SAFETY DATA SHEET

Dow AgroSciences

Emergency Phone: 800-992-5994
Dow AgroSciences LLC
Indianapolis, IN 46268

Effective Date: 8-19-05
Product: 05304

REMEDY* ULTRA HERBICIDE

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Remedy* Ultra Herbicide

COMPANY IDENTIFICATION:
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW
Liquid with vegetable oil odor. May cause eye and skin irritation. Toxic to aquatic organisms and birds.

EMERGENCY PHONE NUMBER: 800-992-5994

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Triclopyr-butotyl	CAS # 64700-56-7	60.5%
Balance, Total		39.5%

4. FIRST AID:

EYE: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

SKIN: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the MSDS, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES:

FLASH POINT: >200°F (>93.3°C)
METHOD USED: Not applicable

FLAMMABLE LIMITS
LFL: Not determined
UFL: Not determined

EXTINGUISHING MEDIA: Foam, CO_2, or Dry chemical

FIRE AND EXPLOSION HAZARDS: Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS: Absorb small spills with materials such as sand, sawdust, Zorball, or dirt. Wash exposed body areas thoroughly after handling. Report large spills to Dow AgroSciences at 800-992-5994.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors and spray mist. Handle concentrate in ventilated area. Wash thoroughly with soap and water after handling and before eating, chewing gum, using tobacco, using the toilet or smoking. Keep away from food, feedstuffs, and water supplies. Store in original container in a well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINES:
3,5,6-trichloro-2-pyridinyloxyacetic acid: Dow AgroSciences Industrial Hygiene Guide is 2 mg/M3 as acid equivalent, Skin.

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use a NIOSH approved air-purifying respirator.

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: Liquid
ODOR: Vegetable Oil
DENSITY: 1.109 g/mL

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable under normal storage conditions.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Not know to occur.

11. TOXICOLOGICAL INFORMATION:

EYE: May cause eye irritation.

SKIN: Prolonged contact may cause skin irritation with local redness. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD_{50} has not been determined. For triclopyr-butotyl: prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

INGESTION: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Single dose oral LD_{50} has not been determined.

INHALATION: No adverse effects are anticipated from single exposure to vapor.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Triclopyr-butotyl, in animals, effects have been reported on the following organs: blood, kidney and liver.

CANCER INFORMATION: For a similar material: triclopyr: did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): Triclopyr-butotyl did not cause birth defects in laboratory animals. Has been toxic to the fetus in laboratory animals only at doses toxic to the mother.

REPRODUCTIVE EFFECTS: For a similar material triclopyr: in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

MUTAGENICITY: For triclopyr-butotyl: in-vitro and animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:
Based largely or completely on information for triclopyr-butotyl.

Bioconcentration potential is moderate (BCF is between 100 and 3000 or Log Pow between 3 and 5).

DEGRADATION & PERSISTENCE:
Based largely or completely on information for triclopyr-butotyl.

Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

ECOTOXICOLOGY:
Based largely or completely on information for triclopyr-butotyl.

Material is highly toxic to aquatic organisms on an acute basis (LC_{50} or EC_{50} is between 0.1 and 1 mg/L in the most sensitive species tested).
Material is slightly toxic to birds on an acute basis (LD_{50} is between 501 and 2000 mg/kg).
Material is practically non-toxic to birds on a dietary basis (LC_{50} is >5000 ppm).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities.

This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

For all package sizes by all modes of transportation:
This material is not regulated for transport.

15. REGULATORY INFORMATION:

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A delayed health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of

New Jersey
Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Dow AgroSciences

Emergency Phone: 800-992-5994
Dow AgroSciences LLC
Indianapolis, IN 46268

REMEDY* ULTRA HERBICIDE

Effective Date: 8-19-05
Product: 05304

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

16. OTHER INFORMATION:

MSDS STATUS: New
Reference: DR-0394-3848
Replaces RSSDS Dated: 8/11/04
Document code: D03-334-001

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information.

WPC Brands, Inc.
P. O. Box 4406
Bridgeton, MO 63044-0406

Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200

Hazardous Material Identification System – (HMIS)	
HEALTH – 2	REACTIVITY – 0
FLAMMABILITY – 3	PERSONAL – None

I Trade Name: Repel® Insect Repellent Sportsmen Gear Smart Formula 15% Picaridin

Product Type: Aerosol Insect repellent

Product Item Number: HG-94099

Formula Code Number: 21-0865/21-0666

EPA Registration Number	Manufacturer	Emergency Telephone Numbers
121-92-305	Chemsico Division of United Industries Corporation 8494 Chapin Industrial Drive St. Louis, MO 63114	**For Chemical Emergency:** 1-800-633-2873 **For Information:** 1-800-880-1181 **Prepared by:** C. A. Duckworth **Date Prepared:** October 18, 2010

II Hazards Ingredient/Identity Information

Chemical	%	OSHA PEL	ACGIH TLV
Picaridin	15.00	NE	NE
CAS #119515-38-7			
Ethanol	34.00	1000 ppm	1000 ppm
CAS #64-17-5			
Isobutane	10.00	NE	NE

III Physical and Chemical Characteristics

Appearance & Odor: Light mist spray with an alcohol odor
Boiling Point: NA
Vapor Pressure: NA
Specific Gravity: 0.88 at 72° F (H_2O = 1)
Vapor Density: 1.6
% Volatile (by vol.) >90%
Solubility in Water: NA
Evaporation Rate: Approximately 1 (Butyl Acetate = 1)

IV Fire and Explosive Hazards Data

Flash Point: 80° F (PMCC) liquid portion
Flame Extension: 12"
Autoignition Temperature: N/A
Fire Extinguishing Media: Carbon dioxide, Foam, Dry chemical
Decomposition Temperature: NA
Special Fire-Fighting Procedures:
For Small Fires: Use Carbon dioxide or dry chemical extinguisher. *For Large Fires:* Use copious amounts of water.
Unusual Fire and Explosion Hazards: Also see Section VII

V Reactivity Data

Stability: Stable
Polymerization: Will not occur
Conditions to Avoid: None
Incompatible Materials: May soften or damage some synthetics such as rayon. May damage leather.
Hazardous Decomposition or Byproducts: None

VI Health Hazard Data

Eye Contact: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Use of this product may cause skin reactions in rare cases. **First Aid:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present after the first 15 minutes then continue rinsing eye. Call a Poison Control Center or doctor for treatment advice. Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.
Special Notes:

Health conditions Aggravated by Exposure: None known
Ingredients listed by NTP, OSHA, or IARC as Carcinogens or Potential Carcinogens: None

VII Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled:
Flammable material. Remove all possible ignition sources. Soak up with absorbent material. Wash small quantities away with soapy water.

Waste Disposal:
Do not puncture or incinerate. If empty: Place in trash or offer for recycling. If partially filled: Call your local solid waster disposal agency for disposal instructions. Never place unused product down an indoor or outdoor drain.

Handling & Storage Precautions:
Contents under pressure. Keep away from heat, sparks, or open flame. Exposure to temperatures higher than 130°F may cause bursting.

VIII Control Measures

Read and follow label directions. They are your best guide to using this product effectively, and give necessary safety precautions to protect your health.

IX Transportation Data

DOT: Consumer Commodity, ORM-D, UN-1950
IMDG: UN-1950, Aerosols, 2.1
IATA: UN-1950, Aerosols, Flammable, 2.1

The information and statements herein are believed to be reliable but are not to be construed as warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

RECKITT BENCKISER

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	**PROFESSIONAL RESOLVE® SPOT & STAIN CARPET CLEANER (TRIGGER)**
Product Description	Not available.
Manufacturer	Reckitt Benckiser North America, Inc. Morris Corporate Center IV 399 Interpace Parkway (P.O. Box 225) Parsippany, N.J. 07054-0225
Product Identifier	Not available.
Item Number	36241-97402-08

MSDS#	Not available.
Validation Date	**5/3/2004**
Print Date	5/5/2004

In case of Emergency:	Telephone: 800-677-9218 (Professional Products)
Transportation Emergencies:	Chemtrec: 1-800-424-9300 (U.S. & Canada) Outside the U.S & Canada (North America), call: 703-527-3887

Formula Number	713-179 (F/F 378171); 732-191 (F/F 375602)
UPC Number	36241-97402 (32 oz.) Trigger.

Section 2. Composition and Information on Ingredients

ame	CAS #	% by Weight	Exposure Limits : TLV/PEL
1) ISOPROPYL ALCOHOL	67-63-0	1-2	TWA: 983 STEL: 1230 (mg/m³) from ACGIH (TLV) [United States] TWA: 400 STEL: 500 (ppm) from ACGIH (TLV) [United States] TWA: 980 STEL: 1230 (mg/m³) from OSHA (PEL) [United States] TWA: 400 (ppm) from OSHA (PEL) [United States]

Section 3. Hazards Identification

Emergency Overview	No adverse effects are expected from exposure to the recommended use of this product. KEEP OUT OF REACH OF CHILDREN.

Section 4. First Aid Measures

Eye Contact	In case of eye contact, immediately rinse eyes thoroughly with plenty of water. Remove any contact lenses and continue rinsing for at least 15 minutes. If irritation persists, consult a physician.
Skin Contact	In keeping with good hygienic practices, wash exposed areas thoroughly with soap and water.
Inhalation	None required. Remove to fresh air.
Ingestion	Rinse mouth with water. Contact a physician or poison control center if symptoms develop. NEVER give an unconscious person anything to ingest.

Continued on Next Page

Section 5. Fire and Explosion Data

Flammability	Not flammable. See Section 14 for any Shipping Classifications.
Flash Point	CLOSED CUP: Higher than 93.3°C (>200°F). (Tagliabue.).
Explosive Limits in Air	Not available.
Products of Combustion	Not available.
Fire and Explosion Hazards	None known.
Fire Fighting Media and Instructions	Use water spray, foam, dry chemical or carbon dioxide, as suitable for the surrounding fire.
Special Fire Fighting Instructions	Wear self-contained breathing apparatus and protective clothing appropriate for fighting a chemical fire.

Section 6. Accidental Release Measures

Accidental Spill	Small spills: Soak up with an inert absorbent material and dispose of in an appropriate waste container. Rinse surface reside and flush to sink or sanitary sewer. Large spills should be diked, contained and collected for later disposal according to local, state or federal regulations.

Section 7. Handling and Storage

Handling and Storage	Do not mix with bleach or use in conjunction with other household products. Keep from freezing. Store in original container in a secure area, inaccessible to children and pets. KEEP OUT OF REACH OF CHILDREN.

Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	None required.
Eye Protection	Emergency responders should wear full eye and face protection.
Skin Protection	None required.
Respiratory Protection	None required.
Other Protection	None required.
Work/Hygienic Practices	Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

Section 9. Physical and Chemical Properties

Description	Clear liquid. Thin
pH	6.7 [Neutral.]
Boiling/Condensation Point	Not available.
Specific Gravity	0.9985(Water = 1)
Vapor Pressure	Not determined.

Odor	Citrus / Herbaceous.
Color	Pale amber color.

Continued on Next Page

Vapor Density	Not determined.
Viscosity	Not available.
Solubility	Complete.
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	None known.
Incompatibility with Various Substances	Do not mix with bleach or other household cleaners.
Hazardous Decomposition Products	None known.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Exposure effects

Eye Contact	None expected. May cause eye irritation upon direct contact with the eyes.
Skin Contact	None expected.
Inhalation	None expected.
Ingestion	None expected.
Carcinogenicity	Not listed as carcinogenic by OSHA, NTP or IARC.

Section 12. Ecological Information

Ecotoxicity	Not available.

Section 13. Disposal Considerations

Waste Disposal	Rinse empty container thoroughly and discard in trash or rinse and recycle container. Large quantity disposal: Dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

DOT Classification	Not a DOT regulated material (United States).
Proper Shipping Name	Not applicable.
DOT Identification Number	Not applicable
Packing Group	Not applicable
Maritime Transportation	Not applicable.

Continued on Next Page

Hazardous Substances Reportable Quantity	Not applicable.
Special Provisions for Transport	Not applicable.
TDG Classification	Not regulated under TDG.
ADR Classification	Not applicable.
IMDG Classification	Not regulated under IMDG.
IATA Classification	Not regulated under IATA.

Section 15. Regulatory Information

Federal and State Regulations

SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting:

1) ISOPROPYL ALCOHOL — Not available. — 1-2 — Not avai

California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act:
None

Other Classifications

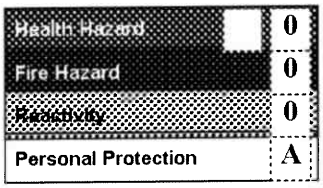
WHMIS (Canada) Not controlled under WHMIS (Canada).

New Jersey Right-To-Know Regulation:

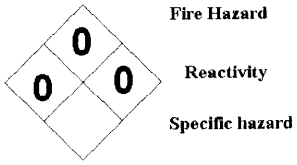
WATER CAS #: 7732-18-5
ISOPROPYL ALCOHOL CAS #: 67-63-0
SODIUM LAURYL SULFATE CAS #: 151-21-3
TETRASODIUM EDTA CAS #: 64-02-8
ETHYLENE GLYCOL HEXYL GLYCOL CAS #: 112-25-4

Section 16. Other Information

HMIS (U.S.A.)



National Fire Protection Association (U.S.A.)



NFPA Aerosol Level Not applicable.

Validated by Product Safety on 5/3/2004.

Printed 5/5/2004.

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

1. Identification

Product identifier **Gunk Brake Parts Cleaner - Chlorinated**

Other means of identification

SDS number M720

Part No. M720

Tariff code 2903.23.0000

Recommended use Brake Cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name RSC Chemical Solutions

Address 600 Radiator Road
Indian Trail, NC 28079
United States

Telephone Customer Service: (704) 821-7643
Technical: (704) 821-7643

Website www.rscbrands.com

E-mail sds@rscbrands.com

Emergency phone number Emergency Telephone: (303) 623-5716
Emergency Contact: RMPDC (877-740-5015)

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Classification not possible
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Sensitization, skin	Category 1B
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 3

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Contains gas under pressure; may explode if heated. Causes skin irritation. May cause an allergic skin reaction. Causes eye irritation. May cause drowsiness or dizziness. May cause cancer. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	2.56, 2.56% of the mixture consists of component(s) of unknown acute oral toxicity. 2.56% of the mixture consists of component(s) of unknown acute dermal toxicity. 97.44% of the mixture consists of component(s) of unknown acute inhalation toxicity. NOTE: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The container label may not include the OSHA label elements listed in this document. Always carefully review the entire SDS and the product label prior to use in the workplace.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Perchlorethylene		127-18-4	90 - 100
Carbon Dioxide		124-38-9	1 - < 3

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions	Containers should be cooled with water to prevent vapor pressure build up.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Store locked up. Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Perchlorethylene (CAS 127-18-4)	Ceiling	200 ppm
	TWA	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Perchlorethylene (CAS 127-18-4)	STEL	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
	TWA	25 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Perchlorethylene (CAS 127-18-4)	0.5 mg/l	Tetrachloroethylene	Blood	*
	3 ppm	Tetrachloroethylene	End-exhaled air	*

* - For sampling details, please see the source document.

Exposure guidelines

US - Minnesota Haz Subs: Skin designation applies

Perchlorethylene (CAS 127-18-4) Skin designation applies.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece. Chemical respirator with organic vapor cartridge and full facepiece if threshold limits are exceeded.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance Clear. Liquid

Physical state Liquid.

Form Aerosol.

Color Colorless

Odor Sweet chloroform like

Odor threshold Not available.

pH Not available.

Melting point/freezing point -8.14 °F (-22.3 °C) estimated

Initial boiling point and boiling range 250.34 °F (121.3 °C) estimated

Flash point None

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available. estimated
Flammability limit - upper (%)	Not available. estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	13 mm Hg @20°C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	530 ppm
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	13.52 lbs/gal
Explosive properties	Not explosive.
Heat of combustion (NFPA 30B)	1.03 kJ/g
Oxidizing properties	Not oxidizing.
Percent volatile	100 %
Specific gravity	1.62
VOC	0 % w/w

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hydrogen chloride.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity	Not known.

Components	Species	Test Results
Perchlorethylene (CAS 127-18-4)		
Acute		
Oral		
LD50	Rat	2400 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Perchlorethylene (CAS 127-18-4) 2A Probably carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Perchlorethylene (CAS 127-18-4) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
Perchlorethylene (CAS 127-18-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	6.1 - 9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4.82 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Perchlorethylene 3.4

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number	Not available.
UN proper shipping name	Consumer Commodity
Transport hazard class(es)	
Class	ORM-D
Subsidiary risk	-
Packing group	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	8, 146, 335, IB3, T4, TP1, TP29
Packaging exceptions	155
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN1950
UN proper shipping name	Aerosol, non flammable
Transport hazard class(es)	
Class	2.2
Subsidiary risk	6.1
Packing group	Not available.
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	Aerosols, MARINE POLLUTANT
Transport hazard class(es)	
Class	2.2
Subsidiary risk	6.1
Packing group	Not available.
Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

Marine pollutant

General information IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Perchlorethylene (CAS 127-18-4) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Perchlorethylene	127-18-4	90 - 100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Perchlorethylene (CAS 127-18-4)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Perchlorethylene (CAS 127-18-4) Listed: April 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Perchlorethylene (CAS 127-18-4)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-24-2015

Revision date 03-19-2018

Version # 08

HMIS® ratings Health: 2*
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 2
Flammability: 0
Instability: 0

NFPA ratings

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information This document has undergone significant changes and should be reviewed in its entirety.

DOW CORNING

DOW CORNING CORPORATION
Material Safety Data Sheet

Version: 2.5
Revision Date: 2010/09/15

DOW CORNING(R) 737 NEUTRAL CURE SEALANT - CLEAR

1. PRODUCT AND COMPANY IDENTIFICATION

Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

24 Hour Emergency Telephone: (989) 496-5900
Customer Service: (989) 496-6000
Product Disposal Information: (989) 496-6315
CHEMTREC: (800) 424-9300

MSDS No.: 04001443
Revision Date: 2010/09/15

Generic Description: Silicone elastomer
Physical Form: Paste
Color: Colorless
Odor: Some odor

NFPA Profile: Health 2 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause mild irritation.

Skin: May cause moderate irritation.

Inhalation: Irritates respiratory passages very slightly. Overexposure by inhalation may cause drowsiness, dizziness, confusion or loss of coordination.

Oral: Overexposure by ingestion may cause drowsiness, dizziness, confusion or loss of coordination.

Prolonged/Repeated Exposure Effects

Skin: Repeated skin contact may cause allergic skin reaction. Overexposure by skin absorption may injure the following organ(s): Blood.

Inhalation**:** Overexposure by inhalation may injure the following organ(s): Blood. Liver.

Oral: Overexposure by ingestion may injure the following organ(s): Blood.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS Number	Wt %	Component Name
22984-54-9	3.0 - 7.0	Methyl tri(ethylmethylketoxime) silane

The above components are hazardous as defined in 29 CFR 1910.1200.

4. FIRST AID MEASURES

Eye:	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.
Skin:	As quickly as possible remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately flush with lukewarm gently flowing water for 15 minutes. Completely decontaminate clothing, shoes and leather goods before reuse or discard. Obtain medical attention.
Inhalation:	Remove from the source of contamination or move to fresh air. If irritation persists, obtain medical advice.
Oral:	Never give anything by mouth if victim is rapidly losing consciousness or convulsing. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical attention.
Notes to Physician:	Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point:	Not applicable.
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.
Extinguishing Media:	On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO2), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire Hazards:	None.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up:	Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See Section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves methyl ethyl ketoxime (MEKO) when exposed to water or humid air. Provide ventilation during use to control methyl ethyl ketoxime (MEKO) within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally.

Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

CAS Number	Component Name	Exposure Limits
22984-54-9	Methyl tri(ethylmethylketoxime) silane	See ethyl methyl ketoxime comments.

Ethyl methyl ketoxime is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within the following exposure guidelines: Vendor guide TWA: 3 ppm, STEL: 10 ppm; AIHA WEEL TWA: 10 ppm.

Engineering Controls

Local Ventilation:	Recommended.
General Ventilation:	Recommended.

Personal Protective Equipment for Routine Handling

Eyes:	Use proper protection - safety glasses as a minimum.
Skin:	Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.
Suitable Gloves:	Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.
Inhalation:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.
Suitable Respirator:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

Eyes:	Use full face respirator.
Skin:	Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.
Inhalation/Suitable Respirator:	Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Precautionary Measures:	Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally. Use reasonable care.

Comments:	Product evolves methyl ethyl ketoxime (MEKO) when exposed to water or humid air. Provide ventilation during use to control methyl ethyl ketoxime (MEKO) within exposure guidelines or use respiratory protection.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Paste
Color:	Colorless
Odor:	Some odor
Specific Gravity @ 25°C:	1.04
Viscosity:	Not determined.
Freezing/Melting Point:	Not determined.
Boiling Point:	Not determined.
Vapor Pressure @ 25°C:	Not determined.
Vapor Density:	Not determined.
Solubility in Water:	Not determined.
pH:	Not determined.
Volatile Content:	Not determined.
Flash Point:	Not applicable.
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.

Note: The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable.
Hazardous Polymerization:	Hazardous polymerization will not occur.
Conditions to Avoid:	None.
Materials to Avoid:	Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde. Nitrogen oxides. Metal oxides.

11. TOXICOLOGICAL INFORMATION

Component Toxicology Information

Methyl Ethyl Ketoxime (MEKO) is formed upon contact with water or humid air. Male rodents exposed to MEKO vapor throughout their lifetime developed liver cancer. Additional testing is planned by the MEKO supplier to determine any relevance to humans. Until more data is known, exposure levels should be maintained as low as achievable.

Special Hazard Information on Components

Sensitizers

CAS Number	Wt %	Component Name	
22984-54-9	3.0 - 7.0	Methyl tri(ethylmethylketoxime) silane	Possible skin sensitizer.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal. Call (989) 496-6315, if additional information is required.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

Call Dow Corning Transportation, (989) 496-8577, if additional information is required.

15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355):
None.

Section 304 CERCLA Hazardous Substances (40 CFR 302):
None.

Section 311/312 Hazard Class (40 CFR 370):

Acute:	Yes
Chronic:	Yes
Fire:	No
Pressure:	No
Reactive:	No

Section 313 Toxic Chemicals (40 CFR 372):
None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

DOW CORNING(R) 737 NEUTRAL CURE SEALANT - CLEAR

Supplemental State Compliance Information

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

Massachusetts

CAS Number	Wt %	Component Name
7631-86-9	7.0 - 13.0	Silica, amorphous

New Jersey

CAS Number	Wt %	Component Name
70131-67-8	70.0 - 90.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	7.0 - 13.0	Silica, amorphous
22984-54-9	3.0 - 7.0	Methyl tri(ethylmethylketoxime) silane

Pennsylvania

CAS Number	Wt %	Component Name
70131-67-8	70.0 - 90.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	7.0 - 13.0	Silica, amorphous
22984-54-9	3.0 - 7.0	Methyl tri(ethylmethylketoxime) silane

DOW CORNING(R) 737 NEUTRAL CURE SEALANT - CLEAR

16. OTHER INFORMATION

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

(R) indicates Registered Trademark

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 02/25/2009 Reviewed on 02/25/2009

1 Identification of substance

Trade name: SALCON SILICONE S-99

Product code: SY13730000

Manufacturer/Supplier: SEYMOUR OF SYCAMORE
917 Crosby Avenue
Sycamore, IL 60178
(815)-895-9101, www.seymourpaint.com

Emergency information: CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.*

2 Composition/Data on components

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
110-54-3	n-hexane	70.85%
74-98-6	propane	12.61%
106-97-8	n-butane	7.41%

3 Hazards identification

Hazard description:
Harmful
Extremely flammable
Dangerous for the environment

Physical dangers: Extremely flammable.
Irritating to skin.
Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Keep out of the reach of children.

Effects of chronic overexposure: May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be harmful or fatal.

NFPA ratings (scale 0 - 4): Health = 1
Fire = 4
Reactivity = 3

HMIS-ratings (scale 0 - 4): Health= 1
Fire= 4
Physical Hazard= 3

4 First aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: Contact physician or poison control center.

5 Fire fighting measures

Extinguishing agents: CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.
Protective equipment: No special measures required.

6 Accidental release measures

Personal safety precautions: Wear protective equipment. Keep unprotected persons away.
Environmental safety precautions: Do not allow product to reach sewage systems or ground water.
Measures for cleaning/ collecting: Ensure adequate ventilation.

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic discharges.
Storage requirements: Observe pressurized container storage regulations. Consult with your local authorities.

(Contd. on page 2)

Material Safety Data Sheet
acc. to ISO/DIS 11014

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Trade name: SALCON SILICONE S-99

(Contd. of page 1)

8 Exposure controls and personal protection:

Components with limit values that require monitoring at the workplace:	
110-54-3 n-hexane	
PEL	1800 mg/m³, 500 ppm
REL	180 mg/m³, 50 ppm
TLV	176 mg/m³, 50 ppm Skin; BEI
74-98-6 propane	
PEL	1800 mg/m³, 1000 ppm
REL	1800 mg/m³, 1000 ppm
TLV	Varies mg/m³, 1000 ppm
106-97-8 n-butane	
REL	1900 mg/m³, 800 ppm
TLV	Varies mg/m³, 1000 ppm

Protective hygienic measures: Keep away from foodstuffs and animal feed. Wash hands after use.
Avoid contact with the skin.

Breathing equipment: A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. Please consult an authority on chemical hygeine monitoring if you suspect overexposure conditions exist and need a specific recommendation on proper ventilation techniques and personal protection.

Protection of hands: Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove recommendation can be given.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties:

General Information:	
Odor:	Aromatic
Boiling point/Boiling range:	-44°C
Flash point:	-19°C
Ignition temperature:	240°C
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit. In use, may form flammable/explosive vapour-air mixture.
Lower Explosion Limit:	1.2 Vol %
Upper Explosion Limit:	10.9 Vol %
Vapor Pressure:	40 PSI, 2750 hPa
Density at 20°C:	0.66084 g/cm³
Specific Gravity:	Between 0.77 and 0.85 (Water equals 1.00)
VOC content:	600.5 g/l / 5.01 lb/gl
VOC content (less exempt solvents):	90.9 %
MIR value:	90.9 %
MIR Value:	1.64
Solids content:	9.1 %

10 Stability and reactivity:

Conditions to be avoided: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Possibility of Hazardous Reactions: No dangerous reactions known.

11 Toxicological information:

Primary effect on the skin: Irritant to skin and mucous membranes.

Primary effect on the eye: No irritating effect.

Sensitization: No sensitizing effects known.

(Contd. on page 3)

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acc. to ISO/DIS 11014

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Trade name: SALCON SILICONE S-99

(Contd. of page 2)

Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations:

12 Ecological information

Other information: This product does not contain any chloroflourocarbons (CFC's),chlorinated solvents, lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), or polybrominated diphenyl ether (PDBE). No specific ecological data is available for this product.

Ecotoxical effects:

Acquatic toxicity: Harmful to aquatic organisms.
Hazardous for water, do not empty into drains.

Remark: Toxic for fish

13 Disposal considerations

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation: Completely empty cans should be recycled.

14 Transport information:

Hazard class:	2.1
Identification number:	N/A
Label	2.1
ADR/RID class:	2 5F Gases
UN-Number:	1950
IMDG Class:	2.1
Packaging group:	II
EMS Number:	F-D,S-U
Marine pollutant:	No
ICAO/IATA Class:	2.1
Propper shipping name:	Aerosols, Flammable Consumer Commodity ORM-D

15 Regulations

SARA Section 355 (extremely hazardous substances):

None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

110-54-3	n-hexane

TSCA (Toxic Substances Control Act): All ingredients are listed.

PROPOSITION 65 Chemicals known to cause cancer:

None of the ingredients in this product are listed.

EPA: A= Known human carcinogen B= Probable human carcinogen
C= Possible human carcinogen
D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).

110-54-3	n-hexane	II

IARC: Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of carcinogenicity.
Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.

Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of carcinogenicity.
Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.

ACGIH TLVs: A1-designates a confirmed human carcinogen.
A2-designates a suspected human carcinogen.
A3-designates an animal carcinogen.
A4-designates "not classifiable as a human carcinogen".

A1-designates a confirmed human carcinogen.
A2-designates a suspected human carcinogen.
A3-designates an animal carcinogen.
A4-designates "not classifiable as a human carcinogen".

(Contd. on page 4)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 02/25/2009 Reviewed on 02/25/2009

Trade name: SALCON SILICONE S-99

(Contd. of page 3)

NIOSH:

None of the ingredients is listed.

Risk phrases:
Extremely flammable.
Irritating to skin.
Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases:
Keep out of the reach of children.
Keep in a cool place.
Keep container in a well-ventilated place.
Keep away from food, drink and animal feedingstuffs.
Keep away from sources of ignition - No smoking.
Do not breathe gas/fumes/vapour/spray.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
Wear suitable protective clothing and gloves.
If swallowed, seek medical advice immediately and show this container or label.
Use only in well-ventilated areas.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact: Regulatory Affairs

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
VOC: Volatile Organic Compounds (USA, EU)

SALISBURY
by Honeywell

SAFETY DATA SHEET
PRODUCT: Salcon Silicone Spray

1. IDENTIFICATION

PRODUCT NAME: SUPER SALCO CLEANER
RECOMMENDED USE: GENERAL PURPOSE CLEANER
RESTRICTIONS ON USE: DO NOT USE IN A MANNER INCONSISTENT WITH THE LABEL.
LABEL BRAND: SALISBURY
SDS 100798 **CODE** 100860573, 100860574, 100860573

MADE BY: **US CHEMICAL** 316 HART STREET WATERTOWN,WI 53094 USA
DIST BY: **SALISBURY BY HONEYWELL** 101 E. CROSSROADS PKWY STE A BOLINGBROOK, IL 60440 USA
MEDICAL EMERGENCY: 1-866-923-4913 USA
SPILL EMERGENCY: 1-800-424-9300 USA
PRODUCT INFORMATION: 1-877-406-4501 USA (8 A.M. TO 5 P.M. CST MONDAY TO FRIDAY)

2. HAZARD(S) IDENTIFICATION

CLASSIFICATION: EYE DAMAGE(CATEGORY 1), SKIN IRRITATION (CATEGORY 2)

LABEL ELEMENTS
SIGNAL WORD: DANGER
PICTOGRAMS: CORROSION

HAZARD STATEMENTS: CAUSES SERIOUS EYE DAMAGE AND SKIN IRRITATION.
PRECAUTIONARY STATEMENTS: Wear chemical-splash safety goggles and chemical-resistant protective gloves. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Wash hands and affected areas thoroughly after handling.
FIRST AID: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
IF ON SKIN: Wash with plenty of water. If skin irritation occurs, get medical attention. Take off contaminated clothing and wash it before reuse.
IF SWALLOWED: Rinse mouth. **Do NOT** induce vomiting without medical advice. If conscious, dilute by drinking up to a cupful of milk or water as tolerated.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
START FIRST AID. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.
EMERGENCY TELEPHONE: 1-866-923-4913

Storage: Keep container tightly closed. Store locked up.
Disposal: Dispose of contents in accordance with all federal, state and local applicable laws and regulations.
KEEP OUT OF REACH OF CHILDREN. FOR COMMERCIAL
HAZARDS NOT OTHERWISE CLASSIFIED: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT(S)	CAS	# WEIGHT %
SODIUM METASILICATE	6834-92-0	3.4
ALCOHOL ETHOXYLATES	68439-46-3	3.0

STATE RIGHT TO KNOW: SEE SECTION 15 FOR STATE RTK CHEMICAL NAMES IN MIXTURE.

Salisbury by Honeywell 101 E. Crossroads Pkwy, Ste. A, Bolingbrook, IL 60440 | Toll-Free Phone (USA):877.406.4501 | Toll-Free Fax (USA):866.824.4922 | Phone:630.343.3800
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4. FIRST-AID MEASURES

IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING FOR AT LEAST 15 MINUTES.
IF ON SKIN: WASH WITH PLENTY OF WATER. IF SKIN IRRITATION OCCURS, GET MEDICAL ATTENTION. TAKE OFF CONTAMINATED CLOTHING AND WASH IT BEFORE REUSE.
IF SWALLOWED: RINSE MOUTH. Do NOT INDUCE VOMITING WITHOUT MEDICAL ADVICE. IF CONSCIOUS, DILUTE BY DRINKING UP TO A CUPFUL OF MILK OR WATER AS TOLERATED.
IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING.
START FIRST AID. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.
EMERGENCY TELEPHONE: 1-866-923-4913

MOST IMPORTANT SYMPTOMS / EFFECTS: CAUSES SERIOUS EYE DAMAGE AND SKIN IRRITATION. MAY CAUSE BLINDNESS WITHOUT IMMEDIATE FIRST AID. HARMFUL IF SWALLOWED.
MEDICAL CONDITIONS AGGRAVATED: NONE KNOWN.

NOTE TO PHYSICIAN: CALL 1-866-923-4913 FOR EXPOSURE MANAGEMENT ASSISTANCE.

5. FIRE-FIGHTING MEASURES

CHEMICAL HAZARDS: EYE CORROSIVE AND SKIN IRRITANT. NON-FLAMMABLE.
COMBUSTION PRODUCT HAZARDS: OXIDES OF CARBON AND OTHER FUMES.
METHODS: SELECT EXTINGUISHER AND METHODS BASED ON FIRE SIZE AND TYPE.
EQUIPMENT: WEAR SCBA AND FULL PROTECTIVE GEAR AS CONDITIONS WARRANT.
NFPA RATING: HEALTH-3/FLAMMABILITY-0/ INSTABILITY-0/SPECIAL HAZARD-N.AP.
SUITABLE EXTINGUISHERS: WATER, DRY CHEMICAL, CO2 OR FOAM SUITABLE FOR FIRE.
UNSUITABLE EXTINGUISHERS: NO RESTRICTIONS BASED ON CHEMICAL HAZARDS.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: EVACUATE UNPROTECTED PERSONNEL FROM AREA. WEAR PERSONAL PROTECTION INCLUDING RUBBER BOOTS. SEE SECTION 8. VENTILATE AREA IF NEEDED. BE CAREFUL NOT TO SLIP. WASH THOROUGHLY AFTER CLEAN-UP.
ENVIRONMENTAL PRECAUTIONS: PREVENT SPILL FROM ENTERING DRAIN, STORM SEWER OR SURFACE WATERWAY. PREVENT WATER AND SOIL CONTAMINATION.
CLEAN-UP METHODS: SMALL SPILLS MAY BE WIPED UP AND RINSED WITH WATER. FOR LARGER SPILLS, DIKE TO CONTAIN. PUMP TO LABELED CONTAINER OR ABSORB SPILLAGE AND SCOOP UP WITH INERT ABSORBENT MATERIAL. AFTER SPILL COLLECTION, RINSE AREA WITH WATER AND FOLLOW WITH NORMAL CLEAN-UP PROCEDURES.

7. HANDLING AND STORAGE

HANDLING: FOLLOW ALL LABEL DIRECTIONS. INSTRUCT PERSONNEL ABOUT PROPER USE, HAZARDS, PRECAUTIONS, AND FIRST AID MEASURES. AVOID INHALATION, INGESTION, AND CONTACT WITH SKIN, EYES AND CLOTHING. DO NOT TASTE OR SWALLOW. REMOVE AND WASH CONTAMINATED CLOTHING AND FOOTWEAR BEFORE REUSE. PRODUCT RESIDUE MAY REMAIN IN EMPTY CONTAINERS. HANDLE CAREFULLY TO AVOID DAMAGING CONTAINER.
STORAGE: KEEP CONTAINER TIGHTLY CLOSED. STORE LOCKED UP. STORE AT AMBIENT TEMPERATURES IN A DRY AREA OUT OF DIRECT SUNLIGHT. PROTECT FROM FREEZING. ROTATE STOCK

Salisbury by Honeywell 101 E. Crossroads Pkwy, Ste. A, Bolingbrook, IL 60440 | Toll-Free Phone (USA):877.406.4501 | Toll-Free Fax (USA):866.824.4922 | Phone:630.343.3800
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION Page 3 of 4

EXPOSURE LIMITS: SODIUM METASILICATE = NONE
ALCOHOL ETHOXYLATES = NONE
ENGINEERING CONTROLS: NONE REQUIRED. GENERAL ROOM VENTILATION IS TYPICALLY ADEQUATE.

PERSONAL PROTECTION
EYES: SAFETY GOGGLES (INDIRECT-VENTED OR NON-VENTED) AND AN EYE-WASH STATION.
HANDS: CHEMICAL-RESISTANT PROTECTIVE GLOVES (RUBBER OR NEOPRENE).
RESPIRATORY: SUITABLE RESPIRATOR IF MISTS/VAPORS ARE NOT CONTROLLED BY VENTILATION.
FEET: NONE REQUIRED. RUBBER BOOTS RECOMMENDED DURING SPILL CLEAN-UP.
BODY: NONE REQUIRED.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: LIGHT AMBER LIQUID
ODOR: NONE
pH CONCENTRATE: ABOVE 12.0
pH @ 2500 PPM SOLUTION: N.AV.
pH @ USE DILUTION: N.AV.
PHYSICAL STATE: LIQUID
RELATIVE DENSITY (WATER): 1.080
SOLUBILITY (WATER): COMPLETE
VAPOR PRESSURE: N.AV.
VAPOR DENSITY: N. AV.
VISCOSITY: NON-VISCOUS
AUTO-IGNITION TEMPERATURE: N.AV.
DECOMPOSITION TEMPERATURE: N.AV.
EXPLOSIVE LIMITS (LEL/UEL): NONE
EVAPORATION RATE: N.AV.
FLAMMABILITY (SOLID, GAS): N.AP.
FLASH POINT: NONE
INITIAL BOILING POINT/RANGE: N.AV.
MELTING POINT/FREEZING POINT: N.AV.
ODOR THRESHOLD: N.AV.
PARTITION COEFF. (N-OCTANOL/WATER): N.AV
OTHER: N.AV.

10. STABILITY AND REACTIVITY

REACTIVITY: NO HAZARD.
CHEMICAL STABILITY: STABLE.
POSSIBILITY OF HAZARDOUS REACTIONS: NONE KNOWN. WILL NOT POLYMERIZE.
CONDITIONS TO AVOID: TEMPERATURES BELOW 35°F (1.6°C) OR ABOVE 120°F (49°C).
MATERIALS TO AVOID: DIRECT MIXING WITH OTHER CHEMICALS. MIX ONLY WITH WATER.
HAZARDOUS DECOMPOSITION PRODUCTS: NONE UNDER NORMAL CONDITIONS.

11. TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: EYES, SKIN, INGESTION, INHALATION.
INFORMATION ON ROUTES OF EXPOSURE: NO LC50/LD50 TEST DATA ON MIXTURE.
ACUTE EFFECTS /SYMPTOMS
EYES: CAUSES SERIOUS EYE DAMAGE. MAY CAUSE PAIN, REDNESS AND WATERING.
SKIN: CAUSES SKIN IRRITATION. MAY CAUSE DELAYED PAIN, DRYING AND REDNESS.
INGESTION: CAUSES IRRITATION OR BURNS TO MOUTH, THROAT AND STOMACH.
INHALATION: CAUSES IRRITATION OR BURNS TO NOSE, THROAT + RESPIRATORY SYSTEM.
CHRONIC / OTHER EFFECTS: NO REPORTABLE GERM CELL MUTAGENS, SKIN SENSITIZERS, RESPIRATORY SENSITIZERS, REPRODUCTIVE TOXINS OR ASPIRATION HAZARDS.
SPECIFIC TARGET ORGANS (SINGLE/REPEATED): NONE KNOWN.
NUMERICAL MEASURES OF TOXICITY: ATEmix (ORAL-RAT) = ABOVE 2000 MG / KG
CARCINOGENS: NO REPORTABLE ACGIH, IARC, NTP, OR OSHA CARCINOGENS.temperatures.

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12. ECOLOGICAL INFORMATION

ECOTOXICITY / CHEMICAL FATE: NOT AVAILABLE.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: DISPOSE OF CONTENTS IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL APPLICABLE LAWS AND REGULATIONS. CONSULT STATE AND LOCAL AUTHORITIES FOR RESTRICTIONS ON DISPOSAL OF CHEMICAL WASTE. MANAGE CHEMICAL WASTES THROUGH AN APPROVED WASTE TREATMENT FACILITY. DO NOT REUSE EMPTY CONTAINER. RINSE EMPTY CONTAINER THOROUGHLY WITH WATER BEFORE DISCARDING CONTAINER IN ACCORDANCE WITH CURRENT LOCAL COMMUNITY CODES. PLEASE RECYCLE EMPTY CONTAINER WHENEVER POSSIBLE.

14. TRANSPORT INFORMATION

DOT / IMDG / IATA / TDG: NOT REGULATED

15. REGULATORY INFORMATION

EPA CERCLA RQ: NO
EPA REGISTERED: NO
OSHA HAZARDOUS: YES
PHOSPHORUS CONTENT: SEE LABEL
PROPOSITION 65: NO
SARA 311/312 HAZARDS: ACUTE
SARA 313 CHEMICALS: NO
STATE RIGHT TO KNOW: WATER/7732-18-5, SODIUM TRIPOLYPHOSPHATE/7758-29-4, SODIUM METASILICATE/6834-92-0, ALCOHOL ETHOXYLATES/68439-46-3, POTASSIUM SALT OF DIBASIC FATTY ACID/68127-33-3
TSCA INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON THE INVENTORY.
VOC: 0.00% CALCULATION METHOD USED IS BASED ON CALIFORNIA ARB STANDARD.

16. OTHER INFORMATION

PREPARATION DATE: 9-9-14 **PREPARED BY**: RC **REVISED SECTION:** 16
ABBREVIATIONS: N.AV. = NOT AVAILABLE N.AP. = NOT APPLICABLE

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SC Johnson Professional Glade Fabric and Air Odor Control - Clear Springs TM/MC

Version *2*.0 Print Date 09/18/2017

Revision Date 07/21/2015 SDS Number 350000014339

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **SC Johnson Professional Glade Fabric and Air Odor Control - Clear Springs TM/MC**

Recommended use : Speciality Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252

Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

Hazard classification	Hazard category	Hazards identification
Flammable liquids	Category 3	Flammable liquid and vapour.
Eye irritation	Category 2B	Causes eye irritation.

Labelling

Hazard symbols
Flame

Signal word
Warning

Hazard statements
Flammable liquid and vapour.
Causes eye irritation.

Precautionary statements
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.

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Read label before use.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
In case of fire: Use foam for extinction.
Store in a well-ventilated place. Keep cool.
Dispose of contents/ container to an approved incineration plant.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves.
Wash hands thoroughly after handling.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight percent
Ethyl alcohol	64-17-5	5.00 - 10.00
Triethylene glycol	112-27-6	1.00 - 5.00
Didecyldimethylammonium chloride	7173-51-5	0.10 - 1.00

The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Skin contact : IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water/shower.

Inhalation : No special requirements.

Ingestion : No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during firefighting : Flammable liquid. Vapors are heavier than air and may travel to a source of ignition and flash back. Liquid run-off to sewers may create fire/explosion hazard. Container may melt and leak in heat of fire.

Further information : Cool and use caution when approaching or handling fire-exposed containers. For large quantities of flammable liquids, consider containment to prevent the spread of fire. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Remove all sources of ignition.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Wear personal protective equipment.
Wash thoroughly after handling.

Environmental precautions : Outside of normal use, avoid release to the environment.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
Use only non-sparking equipment.
Dike large spills.
Clean residue from spill site.

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7. HANDLING AND STORAGE

Handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing.
For personal protection see section 8.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.
Wash thoroughly after handling.

Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.
Take measures to prevent the build up of electrostatic charge.
Use only non-sparking tools.
Use explosion-proof equipment.
Ground/bond container and receiving equipment.

Storage

Requirements for storage areas and containers : Keep container closed when not in use.
Keep tightly closed.
Store in a well-ventilated place. Keep cool.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Ethyl alcohol	64-17-5	1,900 mg/m3	1,000 ppm	-	OSHA TWA
Ethyl alcohol	64-17-5	-	1,000 ppm	-	ACGIH STEL

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

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Eye protection	:	Safety glasses with side-shields
Skin and body protection	:	No special requirements.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Color	:	clear
Odor	:	pleasant
Odour Threshold	:	No data available
pH	:	4.0 - 6.0
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	54 °C 129.2 °F
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	No data available

Vapour pressure	:	No data available
Vapour density	:	No data available
Relative density	:	0.9905 g/cm3 at 20 C
Solubility(ies)	:	soluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	6.1 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified

:

10. STABILITY AND REACTIVITY

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Possibility of hazardous reactions : Stable under recommended storage conditions.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview : Warning

Acute oral toxicity : LD50
estimated
> 5,000 mg/kg

Acute inhalation toxicity : LC50
estimated
> 5.29 mg/l

Acute dermal toxicity : LD50
estimated
> 5,000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	Oral
Acute toxicity	No classification proposed	Dermal
Acute toxicity	No classification proposed	Inhalation - Dust and Mist
Acute toxicity	No classification proposed	Inhalation - Vapour
Acute toxicity	No classification proposed	Inhalation - Gas

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Skin corrosion/irritation	No classification proposed	-
Eye irritation	Category 2B	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

Toxicity to fish

Components	End point	Species	Value	Exposure time
Ethyl alcohol	flow-through	Pimephales promelas (fathead minnow)	14,200 mg/l	96 h

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	test LC50			
Triethylene glycol	static test LC50	Lepomis macrochirus	10,000 mg/l	96 h
Didecyldimethylammonium chloride	semi-static test LC50	Danio rerio (zebra fish)	0.49 mg/l	96 h

Toxicity to aquatic invertebrates

Components	End point	Species	Value	Exposure time
Ethyl alcohol	static test EC50	Daphnia magna (Water flea)	2 mg/l	48 h
	NOEC	Daphnia magna	9.6 mg/l	9 d
Triethylene glycol	static test EC50	Daphnia magna (Water flea)	> 10,000 mg/l	48 h
Didecyldimethylammonium chloride	static test EC50	Daphnia magna (Water flea)	0.029 mg/l	48 h
	NOEC	Daphnia magna	0.021 mg/l	21 d

Toxicity to aquatic plants

Components	End point	Species	Value	Exposure time
Ethyl alcohol	Static EC50	Chlorella vulgaris (Fresh water algae)	275 mg/l	72 h
Triethylene glycol	No data available			
Didecyldimethylammonium chloride	static test EC50 OECD Test Guideline 201	Pseudokirchneriella subcapitata (microalgae)	0.053 mg/l	96 h

Persistence and degradability

Component	Biodegradation	Exposure time	Summary
Ethyl alcohol	97 %	28 d	Readily biodegradable
Triethylene glycol	No data available		
Didecyldimethylammonium chloride	69 %	28 d	Readily biodegradable

Bioaccumulative potential

Component	Bioconcentration factor (BCF)	Partition Coefficient n-Octanol/water (log)
Ethyl alcohol	3.2 estimated	-0.35 Measured
Triethylene glycol	No data available	-1.75
Didecyldimethylammonium chloride	929.2	2.58

Mobility

Component	End point	Value
Ethyl alcohol	No data available	
Triethylene glycol	log Koc	1
Didecyldimethylammonium chloride	Koc	667 - 24433

PBT and vPvB assessment

Component	Results
Ethyl alcohol	Not fulfilling PBT and vPvB criteria
Triethylene glycol	Not fulfilling PBT and vPvB criteria
Didecyldimethylammonium chloride	Not fulfilling PBT and vPvB criteria

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

	Land transport	Sea transport	Air transport
UN number	1993	1993	1993
UN proper shipping name	UN 1993 Flammable liquid, N.O.S. (Ethyl alcohol)	UN 1993 Flammable liquid, N.O.S. (Ethyl alcohol)	UN 1993 Flammable liquid, N.O.S. (Ethyl alcohol)
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	-	-	-
Special precautions for user	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

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16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	2
Reactivity	0

NFPA Ratings

Health	1
Fire	2
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

Safety Data Sheet

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Document Group:	21-7129-6	**Version Number:**	17.02
Issue Date:	03/02/18	**Supercedes Date:**	01/19/18

SECTION 1: Identification

1.1. Product identifier
Scotchgard™ Fabric Protector (Cat. No. 4101, 4106)

Product Identification Numbers
LB-I0NF-4101-S, 70-0051-3463-3, 70-0051-3877-4, 70-0051-6619-7, 70-0052-2829-4, 70-0052-8879-3, 70-0068-4739-9, 70-0068-4741-5, 70-0070-0733-2, 70-0714-1652-6, 70-0714-2560-0, 70-0714-2561-8, 70-0714-2562-6, 70-0714-2566-7

1.2. Recommended use and restrictions on use

Recommended use
Oil, water and stain repellent for fabrics in consumer market

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Home Care Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Flammable Aerosol: Category 1.
Gas Under Pressure: Liquefied gas.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements
Signal word
Danger

Symbols
Flame | Gas cylinder | Exclamation mark |

Pictograms

Hazard Statements
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.

May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:
Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Acetone	67-64-1	37 - 41 Trade Secret *
Isopropyl Alcohol	67-63-0	31 - 35 Trade Secret *
Light Alkylate Petroleum Naphtha	64741-66-8	17 - 21 Trade Secret *
Carbon Dioxide	124-38-9	2 - 6
Fluorochemical Urethane	Trade Secret*	< 3

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode. Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Fluoride	During Combustion

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is

available. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with detergent and water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not breathe thermal decomposition products. Do not use in a confined area with minimal air exchange. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Carbon Dioxide	124-38-9	ACGIH	TWA:5000 ppm;STEL:30000 ppm	
Carbon Dioxide	124-38-9	OSHA	TWA:9000 mg/m3(5000 ppm)	
Isopropyl Alcohol	67-63-0	OSHA	TWA:980 mg/m3(400 ppm)	
Isopropyl Alcohol	67-63-0	ACGIH	TWA:200 ppm;STEL:400 ppm	A4: Not class. as human carcin
Acetone	67-64-1	OSHA	TWA:2400 mg/m3(1000 ppm)	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Provide appropriate local exhaust when product is heated. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Butyl Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates
Half facepiece or full facepiece supplied-air respirator
Organic vapor respirators may have short service life.

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Aerosol
Odor, Color, Grade:	Liquid with chemical odor, contents under pressure.
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*Not Applicable*
Boiling Point	>=134 ºF
Flash Point	-2 ºF [*Test Method:*Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	0.9 %
Flammable Limits(UEL)	12.7 %
Vapor Pressure	<=187 mmHg [@ 20 ºC]
Vapor Density	*No Data Available*
Density	0.8 g/ml
Specific Gravity	0.8 [*Ref Std:*WATER=1] [*Details:*(Liquid fill only)]
Solubility in Water	Moderate
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	> 700 ºF [*Details:*For liquid only]
Decomposition temperature	*No Data Available*
Viscosity	*No Data Available*
Molecular weight	*No Data Available*
Volatile Organic Compounds	Approximately 54 % weight
Percent volatile	Approximately 93.2 % weight

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation-Vapor (4 hours)	Rat	LC50 76 mg/l
Acetone	Ingestion	Rat	LD50 5,800 mg/kg
Isopropyl Alcohol	Dermal	Rabbit	LD50 12,870 mg/kg
Isopropyl Alcohol	Inhalation-Vapor (4 hours)	Rat	LC50 72.6 mg/l
Isopropyl Alcohol	Ingestion	Rat	LD50 4,710 mg/kg
Carbon Dioxide	Inhalation-Gas (4 hours)	Rat	LC50 > 53,000 ppm

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acetone	Mouse	Minimal irritation
Isopropyl Alcohol	Multiple animal species	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Acetone	Rabbit	Severe irritant
Isopropyl Alcohol	Rabbit	Severe irritant

Skin Sensitization

Name	Species	Value
Isopropyl Alcohol	Guinea pig	Not classified

Respiratory Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Acetone	In vivo	Not mutagenic

Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Isopropyl Alcohol	In Vitro	Not mutagenic
Isopropyl Alcohol	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Acetone	Not Specified	Multiple animal species	Not carcinogenic
Isopropyl Alcohol	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
Isopropyl Alcohol	Ingestion	Not classified for development	Rat	NOAEL 400 mg/kg/day	during organogenesis
Isopropyl Alcohol	Inhalation	Not classified for development	Rat	LOAEL 9 mg/l	during gestation
Carbon Dioxide	Inhalation	Not classified for male reproduction	Mouse	LOAEL 350,000 ppm	not available
Carbon Dioxide	Inhalation	Not classified for development	Rat	LOAEL 60,000 ppm	24 hours

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Isopropyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Isopropyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Isopropyl Alcohol	Inhalation	auditory system	Not classified	Guinea pig	NOAEL 13.4 mg/l	24 hours
Isopropyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks

Acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart | liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin | bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Isopropyl Alcohol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 12.3 mg/l	24 months
Isopropyl Alcohol	Inhalation	nervous system	Not classified	Rat	NOAEL 12 mg/l	13 weeks
Isopropyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	12 weeks
Carbon Dioxide	Inhalation	heart | bone, teeth, nails, and/or hair | liver | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	LOAEL 60,000 ppm	166 days

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. Combustion products will include HF. Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
This material contains one or more substances that are subject to a TSCA Consent Order. Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Flammable (gases, aerosols, liquids, or solids)
Gas under pressure

Health Hazards
Specific target organ toxicity (single or repeated exposure)

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)	C.A.S. No	Regulation	Status
Fluorochemical Urethane	Trade Secret	Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals	Applicable

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 3 **Flammability:** 3 **Instability:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.
The NFPA Health code of 3 is due to emergency situations where the material may thermally decompose and release Hydrogen Fluoride. During normal use conditions, please reference Section 2 and Section 11 of the SDS for additional health hazard information.

HMIS Hazard Classification
Health: 2 **Flammability:** 3 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group:	21-7129-6	**Version Number:**	17.02
Issue Date:	03/02/18	**Supercedes Date:**	01/19/18

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3M USA SDSs are available at www.3M.com

3M General Offices
3M Center
St. Paul, MN 55144-1000
1-800-364-3577 or (651) 737-6501 (24 hours)

Safety Data Sheet

2023-09-15 13:19:01.207

Purchase Order #: S3672014
Customer Number: 0020737726

WITHLACOOCHEE SAN ANTONIO SHIP TO
COMMERCE DR 30461
SAN ANTONIO, FL 33576-8003
USA

Dear

Enclosed is the Safety Data Sheet (SDS)* for the product that your company recently purchased from 3M.

Please forward the attached document(s) to the individual in your organization responsible for hazard communication.

If you are a distributor and resell this product, OSHA and EPA require that you transmit this SDS information to your customers at the time of first shipment or whenever you receive revised SDSs from 3M.

3M SDSs are available over the Internet at www.3m.com/MSDSSearch.

3M is committed to meeting our customer requirements. Please contact your 3M customer service or sales representative if you have any questions. If you do not know whom to contact, please call the 3M Product Information Center at 1-800-364-3577.

If you are not currently receiving 3M SDSs by e-mail and would like to do so, please contact our eSDS Administrator at emsdsadmin@mmm.com

*An Article Information Sheet (AIS) or Article Information Letter (AIL) may be enclosed in place of an SDS if the product is an article which does not require an SDS under the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Article Information Sheet

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This Article Information Sheet is provided as a courtesy in response to a customer request. A Safety Data Sheet (SDS) has not been prepared for these product(s) because they are articles. Articles are not subject to the Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200(b)(6)(v)). As defined in this standard: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Document Group:	09-3522-1	**Version Number:**	1.05
Issue Date:	10/27/20	**Supercedes Date:**	02/13/19

SECTION 1: Identification

1.1. Product identifier
Scotch® Vinyl Electrical Color Coding Tape 35 (Blue, Brown, Gray, Green, Orange, Pink, Red, Violet, White, Yellow)

1.2. Recommended use and restrictions on use

Recommended use
Reinsulating and color-coding electrical wiring

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Poly(Vinyl Chloride)	Trade Secret*	> 97
1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich	68515-48-0	< 3

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade

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secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated.

Skin Contact:
No need for first aid is anticipated.

Eye Contact:
No need for first aid is anticipated.

If Swallowed:
No need for first aid is anticipated.

SECTION 5: Fire-fighting measures

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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Appearance	
Physical state	Solid
Color	Multicolor
Specific Physical Form:	Roll of Tape
Odor	Polyvinyl chloride, Solvent
Odor threshold	*Not Applicable*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	*Not Applicable*
Flash Point	*No Data Available*
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Specific Gravity	1.22
Solubility In Water	[*Details:*CONDITIONS: NIL]*No Data Available*
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*Not Applicable*
Viscosity	*Not Applicable*
Molecular weight	*No Data Available*
Volatile Organic Compounds	*Not Applicable*
VOC Less H2O & Exempt Solvents	*No Data Available*

SECTION 10: Stability and reactivity

This material is considered to be non reactive under normal use conditions.

SECTION 11: Toxicological information

Inhalation:
No health effects are expected

Skin Contact:
No health effects are expected

Eye Contact:
No health effects are expected

Ingestion:
No health effects are expected

Additional Information:
This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

SECTION 12: Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a

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significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

SECTION 13: Disposal considerations

Dispose of contents/container in accordance with the local/regional/national/international regulations.

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

California Proposition 65

Ingredient	C.A.S. No.	Classification
DI-ISODECYL PHTHALATE (DIDP)	None	Developmental Toxin
DIISONONYL PHTHALATE (DINP)	None	Carcinogen
DIISONONYL PHTHALATE; 1,2-BENZENEDICARBOXYLIC ACID, DIISONONYL ESTER (DINP)	None	Carcinogen

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	09-3522-1	**Version Number:**	1.05
Issue Date:	10/27/20	**Supercedes Date:**	02/13/19

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Safety Data Sheet

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Document Group:	30-0188-0	**Version Number:**	5.00
Issue Date:	05/22/18	**Supercedes Date:**	01/04/18

SECTION 1: Identification

1.1. Product identifier
3M™ Scotchkote™ Electrical Coating FD

Product Identification Numbers

ID Number	UPC	ID Number	UPC
78-8141-5273-8		80-6116-0413-5	
80-6116-1578-4		80-6116-1722-8	

1.2. Recommended use and restrictions on use

Recommended use
Electrical, Moisture proofing for wire connections.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Flammable Liquid: Category 2.
Serious Eye Damage/Irritation: Category 2A.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements
Signal word
Danger

Symbols
Flame | Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Highly flammable liquid and vapor.

Causes serious eye irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.

Precautionary Statements
General:
Keep out of reach of children.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep cool.
Keep container tightly closed.
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Acetone	67-64-1	60 - 75 Trade Secret *

Acrylonitrile-Butadiene Polymer	9003-18-3	10 - 20
Glycerol Esters of Rosin Acids	8050-31-5	5 - 10
Phenol-Formaldehyde Polymer	25085-50-1	5 - 10
Salicylic Acid	69-72-7	1 - 3 Trade Secret *
Zinc Oxide	1314-13-2	1 - 2

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Protect from sunlight. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	
Zinc Oxide	1314-13-2	OSHA	TWA(as fume):5 mg/m3;TWA(as total dust):15	

			mg/m3;TWA(respirable fraction):5 mg/m3	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human carcin
Acetone	67-64-1	OSHA	TWA:2400 mg/m3(1000 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Provide appropriate local exhaust ventilation on open containers. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Butyl Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Viscous
Odor, Color, Grade:	Dark brown liquid; sharp solvent odor.
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*Not Applicable*
Boiling Point	>=56 ºC [*Details:*Acetone]
Flash Point	-4 ºF [*Test Method:*Closed Cup]

Evaporation rate	1.9 [*Ref Std:*ETHER=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	2.6 %
Flammable Limits(UEL)	12.8 %
Vapor Pressure	<=185 mmHg [@ 68 ºF]
Vapor Density	2.0 [*Ref Std:*AIR=1]
Density	0.87 g/ml
Specific Gravity	0.87 [*Ref Std:*WATER=1]
Solubility in Water	Slight (less than 10%)
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	465 ºC
Decomposition temperature	*No Data Available*
Viscosity	325 centipoise [@ 73.4 ºF]
Average particle size	*No Data Available*
Bulk density	*No Data Available*
Hazardous Air Pollutants	0 % weight [*Test Method:*Calculated]
Molecular weight	*No Data Available*
Volatile Organic Compounds	0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*low solids less exempts]
Percent volatile	40 - 75 % weight
Softening point	*No Data Available*
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	0 lb/gal [*Test Method:*calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	0 % [*Test Method:*calculated SCAQMD rule 443.1]
Solids Content	>=28 % weight

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat
Sparks and/or flames

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Prolonged or repeated exposure may cause:
Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin.
Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation-Vapor (4	Rat	LC50 76 mg/l

	hours)		
Acetone	Ingestion	Rat	LD50 5,800 mg/kg
Acrylonitrile-Butadiene Polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile-Butadiene Polymer	Ingestion	Rat	LD50 > 30,000 mg/kg
Phenol-Formaldehyde Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Glycerol Esters of Rosin Acids	Dermal	Rabbit	LD50 > 5,000 mg/kg
Glycerol Esters of Rosin Acids	Ingestion	Rat	LD50 > 2,000 mg/kg
Phenol-Formaldehyde Polymer	Ingestion	Rat	LD50 5,660 mg/kg
Salicylic Acid	Dermal	Rat	LD50 > 2,000 mg/kg
Salicylic Acid	Ingestion	Rat	LD50 891 mg/kg
Zinc Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Zinc Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acetone	Mouse	Minimal irritation
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
Glycerol Esters of Rosin Acids	Rabbit	Minimal irritation
Salicylic Acid	Rabbit	No significant irritation
Zinc Oxide	Human and animal	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Acetone	Rabbit	Severe irritant
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
Glycerol Esters of Rosin Acids	Rabbit	Mild irritant
Salicylic Acid	Rabbit	Corrosive
Zinc Oxide	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Glycerol Esters of Rosin Acids	Guinea pig	Not classified
Phenol-Formaldehyde Polymer	Human	Some positive data exist, but the data are not sufficient for classification
Salicylic Acid	Mouse	Not classified
Zinc Oxide	Guinea pig	Not classified

Photosensitization

Name	Species	Value
Salicylic Acid	Mouse	Not sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Glycerol Esters of Rosin Acids	In Vitro	Not mutagenic
Salicylic Acid	In Vitro	Not mutagenic
Salicylic Acid	In vivo	Not mutagenic
Zinc Oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Acetone	Not Specified	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
Salicylic Acid	Ingestion	Toxic to development	Rat	NOAEL 75 mg/kg/day	during organogenesis
Zinc Oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available

Acetone	Inhalation	heart | liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin | bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Glycerol Esters of Rosin Acids	Ingestion	liver | heart | skin | endocrine system | bone, teeth, nails, and/or hair | blood | bone marrow | hematopoietic system | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 5,000 mg/kg/day	90 days
Salicylic Acid	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	3 days
Zinc Oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
Zinc Oxide	Ingestion	endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Flammable (gases, aerosols, liquids, or solids)

Health Hazards
Reproductive toxicity
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Zinc Oxide (ZINC COMPOUNDS)	1314-13-2	1 - 2

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 3 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	30-0188-0	**Version Number:**	5.00
Issue Date:	05/22/18	**Supercedes Date:**	01/04/18

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3M™ Scotchkote™ Electrical Coating FD

PO # 117701

Data Sheet **May 2012**

Product Description	3M™ Scotchkote™ Electrical Coating FD is designed as a fast-drying sealant and bonding agent intended for use on joints wrapped with plastic electrical tape.
Product Features	• Compatible with Scotch® Vinyl Electrical Tapes • Fast drying • Flexible when dry • Self-contained applicator • Virtually no waste if container resealed after use
Applications	3M™ Scotchkote™ Electrical Coating FD is intended for use as an outer seal on vinyl tape applications which are subjected to excessive amounts of oil. It is designed to improve the weather resistance of the taped joint of splice. It is suitable for direct burial, direct water immersion or above ground applications. Contact with potable water is not recommended. Precautionary and first aid information for this product may be found in its Material Safety Data Sheet and on the product container
Application Techniques	After taping splices with Scotch Vinyl Electrical Tape, apply 3M™ Scotchkote™ Electrical Coating FD evenly over splice, extending a short distance onto the cable insulation. Be sure the surface is clean, dry and free from oil or grease before electrical coating is applied

3M

3M™ Scotchkote™ Electrical Coating FD

Typical Physical Properties

Technical information provided consists of typical product data and should not be used for specification purposes. Unless otherwise noted, all tests are performed at room temperature.

Physical Properties	Typical Value
Tack Free Time @ 72°F/22°C	12 minutes
Adhesion to: Wood Metal Rubber Plastic	 Good Good Good Good
Electrical Properties	**Typical Value**
Dielectric Strength: Dry 24 hrs. in H_2O	 450 volts/mil 200 volts/mil
Chemical Properties	**Typical Value**
Solvent	Acctone
Solids (25%)	Synthetic rubber & resin
Flash Point	-4°F/-20°C (closed cup)

Availability

Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1.800.245.3573.

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Scotchkote™ Electrical Coating FD
MANUFACTURER: 3M
DIVISION: Electrical Markets Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/30/12
Supercedes Date: 03/29/12

Document Group: 30-0188-0

Product Use:
Intended Use: Electrical
Specific Use: Moisture proofing for wire connections.

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
Acetone	67-64-1	60 - 75
Acrylonitrile-Butadiene Polymer	9003-18-3	10 - 20
Glycerol Esters of Rosin Acids	8050-31-5	5 - 10
Phenol-Formaldehyde Polymer	25085-50-1	5 - 10
Salicylic Acid	69-72-7	1 - 3
Zinc Oxide	1314-13-2	1 - 2

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Viscous
Odor, Color, Grade: Dark brown liquid; sharp solvent odor.
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause severe eye irritation. May cause target organ effects. Contains a chemical or chemicals which can

cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.
Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.
Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	465 ºC
Flash Point	-4 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	2.6 %
Flammable Limits(UEL)	12.8 %
OSHA Flammability Classification:	Class IB Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

6.2. Environmental precautions
For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods
Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Seal the container.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Contents may be under pressure, open carefully. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid breathing of vapors, mists or spray. Avoid prolonged or repeated skin contact. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. For industrial or professional use only. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust ventilation on open containers. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Indirect Vented Goggles
.

8.2.2 Skin Protection

Avoid skin contact. Gloves not normally required.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Butyl Rubber
Polymer laminate
.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full facepiece air-purifying respirator suitable for organic vapors
. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
Acetone	ACGIH	TWA	500 ppm	
Acetone	ACGIH	STEL	750 ppm	
Acetone	OSHA	TWA	2400 mg/m3	
Zinc Oxide	ACGIH	TWA, respirable fraction	2 mg/m3	
Zinc Oxide	ACGIH	STEL, respirable fraction	10 mg/m3	
Zinc Oxide	OSHA	TWA, as fume	5 mg/m3	
Zinc Oxide	OSHA	TWA, respirable fraction	5 mg/m3	
Zinc Oxide	OSHA	TWA, as total dust	15 mg/m3	

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Viscous
Odor, Color, Grade:	Dark brown liquid; sharp solvent odor.
General Physical Form:	Liquid
Autoignition temperature	465 ºC
Flash Point	-4 ºF [*Test Method:* Closed Cup]
Flammable Limits(LEL)	2.6 %
Flammable Limits(UEL)	12.8 %
Boiling Point	>=56 ºC [*Details:* Acetone]
Density	0.87 g/ml
Vapor Density	2.0 [*Ref Std:* AIR=1]
Vapor Pressure	<=185 mmHg [@ 68 ºF]
Specific Gravity	0.87 [*Ref Std:* WATER=1] [*Details:* Ref Std: Water = 1]
pH	*Not Applicable*
Melting point	*Not Applicable*
Solubility in Water	Slight (less than 10%)
Evaporation rate	1.9 [*Ref Std:* ETHER=1]
Hazardous Air Pollutants	0 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	0 g/l [*Test Method:* calculated SCAQMD rule 443.1] [*Details:* low solids less exempts]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	40 - 75 % weight
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	0 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	0 % [*Test Method:* calculated SCAQMD rule 443.1]
Viscosity	325 centipoise [@ 73.4 ºF]
Solids Content	>=28 % weight

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat
Sparks and/or flames

10.2 Materials to avoid
Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition

Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Reclaim solvent if feasible. Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
78-8141-5273-8, 80-6116-0413-5

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Zinc Oxide (ZINC COMPOUNDS)	1314-13-2	1 - 2

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification
Health: 2 **Flammability:** 3 **Reactivity:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:
Section 8: Respiratory protection - recommended respirators information was modified.

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3M USA MSDSs are available at www.3M.com

SAFETY DATA SHEET

1. Identification

Product identifier **Rain-R Shine Blue PVC Cement**

Other means of identification

Product code 1104E

Synonyms Part Numbers: 30890, 30891, 30893, 30894, 30895, 30896, 31954, 31955, 31956, 31957

Recommended use Joining PVC Pipes

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Oatey Co.

Address 4700 West 160th St.
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Furan, Tetrahydro-	109-99-9	40-70
Polyvinyl chloride	9002-86-2	10-20
Acetone	67-64-1	5-15
Cyclohexanone	108-94-1	5-15
Methyl ethyl ketone	78-93-3	5-15
Silica, amorphous, fumed	112945-52-5	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3
		20 mppcf

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3
		250 ppm
	TWA	590 mg/m3
		200 ppm
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3
		300 ppm
	TWA	590 mg/m3
		200 ppm
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	6 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofuran	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1)	Skin designation applies.

US - Tennessee OELs: Skin designation

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9)	Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Translucent liquid.

Color Clear.

Odor Solvent.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 151 °F (66.11 °C)

Flash point 14.0 - 23.0 °F (-10.0 - -5.0 °C)

Evaporation rate 5.5 - 8

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.8

Flammability limit - upper (%) 11.8

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 145 mm Hg @ 20 C

Vapor density 2.5

Relative density 0.92 +/- 0.02

Solubility(ies)

Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1200 - 2500 cP
Viscosity temperature	77 °F (25 °C)

Other information

Bulk density	7.7 lb/gal
VOC (Weight %)	< 510 g/l SQACMD 1168/M316A

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours

Components	Species	Test Results
Oral		
LD50	Rat	1540 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.
Silica, amorphous, fumed (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Acetone (CAS 67-64-1)	-0.24
Cyclohexanone (CAS 108-94-1)	0.81
Furan, Tetrahydro- (CAS 109-99-9)	0.46
Methyl ethyl ketone (CAS 78-93-3)	0.29

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	T11, TP1, TP8, TP27
Packaging exceptions	150
Packaging non bulk	201
Packaging bulk	243

IATA

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1133
UN proper shipping name	ADHESIVES
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer Central nervous system Liver Blood Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
Methyl ethyl ketone (CAS 78-93-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

US state regulations

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)
Silica, amorphous, fumed (CAS 112945-52-5)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)
Polyvinyl chloride (CAS 9002-86-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)

Methyl ethyl ketone (CAS 78-93-3)
Silica, amorphous, fumed (CAS 112945-52-5)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-27-2015

Revision date -

Version # 01

HMIS® ratings
Health: 2
Flammability: 3
Physical hazard: 0

NFPA ratings

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

All Purpose Cleaner

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: All Purpose Cleaner
Common Name: All Purpose Cleaner
SDS Number: All Purpose Cleaner
Revision Date: 8/15/2016
Version: 1

Supplier Details:
Hastings Fiber Glass Products
770 Cook Rd
Hastings, MI 49508

Phone: 269-945-9541
Fax: 269-945-4623
Web: www.hfgp.com

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Serious Eye Damage/Eye Irritation, 2 B
Health, Acute toxicity, 5 Inhalation

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:

no GHS pictograms indicated for this product

GHS Hazard Statements:

H320 - Causes eye irritation
H333 - May be harmful if inhaled

GHS Precautionary Statements:

P103 - Read label before use.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P281 - Use personal protective equipment as required.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Eyes; Inhalation; Skin;
Inhalation: Minimal respiratory tract irritation may occur with exposure to a large amount of material.
Skin Contact: Non-irritating.
Eye Contact: May cause irritation.
Ingestion: Ingestion is not an applicable route of entry for intended use.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Contains no hazardous ingredients

4 FIRST AID MEASURES

Inhalation: If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Promptly flush skin with water until all chemical is removed.
Eye Contact: Flush eyes with large amounts of water, lifting eyelids occasionally to facilitate irrigation. Seek mediacl attention if symptoms develop.
Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If conscious, drink large quantities of water. If vomiting does occur administer additional fluid. Never give anything by mouth to a victim who is unconscious or is convulsing. Get medical attention.

5 FIRE FIGHTING MEASURES

Flammability: Not flammable
Flash Point: N/A

6 ACCIDENTAL RELEASE MEASURES

Product can be flushed to sanitary sewer

7 HANDLING AND STORAGE

Handling Precautions: Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Handle with care and avoid spillage on the floor (slippage).
Storage Requirements: Keep container closed when not in use.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use mechanical (general) ventilation.
Personal Protective Equipment: HMIS PP, A | Safety Glasses

N/A

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	clear liquid		
Odor Threshold:	N/A	**Odor:**	mild
Spec Grav./Density:	1.004	**Solubility:**	complete in water
Viscosity:	N/A	**Freezing/Melting Pt.:**	N/A
Boiling Point:	N/A	**Flash Point:**	N/A
Partition Coefficient:	N/A	**Vapor Density:**	N/A
Vapor Pressure:	N/A	**Auto-Ignition Temp:**	N/A
pH:	7.5-8.0	**UFL/LFL:**	N/A
Evap. Rate:	N/A		
Decomp Temp:	N/A		

10 STABILITY AND REACTIVITY

Chemical Stability: Product is stable under normal conditions.
Conditions to Avoid: none
Materials to Avoid: none
Hazardous Decomposition: none
Hazardous Polymerization: Will not occur

11 TOXICOLOGICAL INFORMATION

No information available

12 ECOLOGICAL INFORMATION

Readily biodegradable.

13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.

14 TRANSPORT INFORMATION

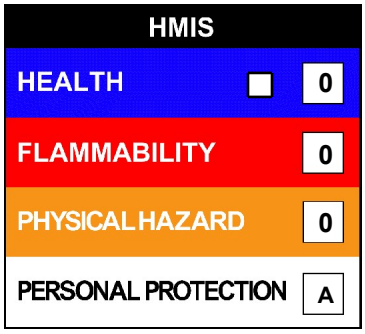
Not Regulated

15 REGULATORY INFORMATION

N/A

16 OTHER INFORMATION

HMIS III: Health = 0, Fire = 0, Physical Hazard = 0
HMIS PPE: A - Safety Glasses



Author: T. Hager
Publication Date: 8/15/2016
Revision No. 1

Safety Data Sheet

Trade name: Magnesium Anodes
Product No: 40-xxx

SECTION 1: PRODUCT AND COMPANY INFORMATION

Product Name	American Carbon Magnesium Anodes
MSDS Number	40-100
Recommended Product Use	Corrosion Prevention
Restrictions on Product Use	None
Manufacturer	American Carbon Company W246S3244 Industrial Ln. Unit A Waukesha, WI 53189
Print Date	03/21/2015
Emergency Phone Number	262-617-2765

SECTION 2: HAZARDS IDENTIFICATION

This material is not considered hazardous in its solid form, but may create hazardous dust during handling and use. Dust in high concentrations and confined space may cause an explosive situation.

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)	Flammable solids (category 1) Flammable gases (category 1)

Pyrophoric solids. 1
Emits flammable gas with water contact

GHS Label Elements

Pictogram

Signal Word Danger

Hazard Statements

Contact with water releases flammable gases, may ignite spontaneously

Precautionary Statements

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses.
Hazards not otherwise classified	May form combustible dust concentrations in air during processing (including but not limited to: cutting, sanding, drilling and other processes). Users of this material should perform combustibility testing prior to use, specific to their use conditions if dust is being generated.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Substance
CAS 7439-95-4 7439-95-4 >95% by weight

Ingredient Name	%	CAS Number
Magnesium	>99	7439-95-4

SECTION 4: FIRST AID MEASURES

Description of necessary first aid measures

Eye Contact: Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Seek medical attention if irritation persists or concerned.

Inhalation: Move exposed person to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position. Seek medical assistance if cough or other symptoms appear.

Skin Contact: Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

Ingestion: Wash mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention if irritation persists or if concerned.

Protection of first aid personnel: No action shall be taken involving any personal risk or without suitable training. If it is suspected that dust is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Dry powder, melting flux, dry sand, metal extinguishing powders

Unsuitable extinguishing media: Water, carbon dioxide extinguishers.

Specific hazards arising from the chemical: Combustible dust formation is a risk. Thermal decomposition can lead to release of irritating gases and vapors. Water cannot extinguish magnesium fires. The hydrogen gas produced only intensifies the fire.

Hazardous thermal decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Special protective actions for fire-fighters: Avoid dust generation. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

Special protective equipment for fire-Fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures

For all personnel and Emergency Responders	Ensure adequate ventilation. Ensure that air-handling systems are operational.
Environmental Precautions	Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. See section 13 for waste disposal information.

Methods and materials for containment and cleaning up

Small Spill	Sweep up and shovel. Contain spillage. Collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations. Wear protective eyewear, gloves and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep suitable closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advise on general occupational hygiene	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Protective Measures	Store contents under inert gas. Air and moisture sensitive. Store in a cool location. Keep away from food and beverages. Provide ventilation for containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient Name	Exposure Limits
Magnesium	No applicable occupational exposure limits

Consult local authorities for acceptable exposure limits.

Engineering measures	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep airborne concentrations of vapor and mists below exposure limits listed above if any.
Hygiene measures	Perform routine housekeeping. Wash hands before breaks and immediately after handling the product.

Respiratory	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US or type P3 (EN143) respirator cartridges as a backup to engineering measures. When necessary use NIOSH approved breathing equipment.
Hands	Wear gloves appropriate for task being performed.
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary. Safety glasses with side shields recommended.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	Solid
Appearance	Silver white solid
Odor	None
Odor threshold	Not Determined
Ph	Not Determined
Melting point	650°C
Boiling point	1107°C
Flash Point	Not Determined
Evaporation rate	Not Determined
Flammable limits	
Lower:	Not Determined
Upper:	Not Determined
Vapor pressure	1 hPa at 621°C
Vapor density	Not Determined
Relative density	1.74 g/cc
Solubility	Insoluble in water
Partition coefficient: n-octanol/water	Not Determined
Auto-ignition temperature	Not Determined
Decomposition temperature	Not Determined
SADT	Not Determined
Viscosity	Not Determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Reacts violently with water.
Chemical Stability	Stable under normal conditions.
Possibility of hazardous reactions	May emit flammable gas when in contact with water.
Conditions to avoid	Incompatible materials.
Incompatible materials	Strong oxidizing agents, acids, acid chlorides, halogens
Hazardous decomposition products	Magnesium oxide

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:	No data available
Skin Corrosion/Irritation:	No data available
Serious Eye Damage/Irritation:	No data available
Respiratory or Skin Sensitization:	No data available
Germ Cell Mutagenicity:	No data available
Teratogenicity:	No data available
Carcinogenicity:	No data available
Specific Target Organ Toxicity (Repeated Exposure):	No data available
Reproductive Toxicity:	No data available
Specific Target Organ Toxicity (Single Exposure):	No data available
Aspiration Hazard:	No data available
Potential Adverse Human Health Effects and Symptoms:	No known significant effects or critical hazards.
Symptoms/Injuries After Inhalation:	No known significant effects or critical hazards.

Symptoms/Injuries After Skin Contact:	No known significant effects or critical hazards.
Symptoms/Injuries After Eye Contact:	No known significant effects or critical hazards.
Symptoms/Injuries After Ingestion:	No known significant effects or critical hazards.
Chronic Symptoms:	No known significant effects or critical hazards.

SECTION 12: ECOLOGICAL INFORMATION

Environmental effects	
Toxicity	No data available
Persistence and degradability	No data available
Bioaccumulative Potential	No data available
Mobility in soil	
Soil/water partition coefficient	No data available
Other adverse effects	The material is inert and is not expected to pose a threat to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal	The generation of waste should be avoided or minimized wherever possible. Disposal of this product and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT	
Identification Number	not regulated
Hazard Class	
Packing Group	
Proper Shipping Name	
Label Codes	
ERG Number	

In Accordance with IMDG	
Identification Number	not regulated
Hazard Class	
Packing Group	
Proper Shipping Name	
Label Codes	
ERG Number	

In Accordance with IATA	
Identification Number	not regulated
Hazard Class	
Packing Group	
Proper Shipping Name	
Label Codes	
ERG Number	

SECTION 15: REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)	All ingredients are listed
SARA 302 Extremely Hazardous Substances	Not Listed
SARA 311/312 Classification	Not Applicable
Massachusetts	Not Listed
Pennsylvania	Not Listed
New Jersey	Not Listed
California Prop 65	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: OTHER INFORMATION

Hazardous Material Information System (U.S.A.)
Health: 0 Flammability: 0 Physical Hazards: 0
Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks.

NFPA Rating (U.S.A.)
Health: 0 Flammability: 0 Reactivity Hazard: 0

History

Date of Issue mm/dd/yyyy	12/03/2015
Date of previous issue	N/A
Version	1.0
Prepared by	American Carbon Company
Notice to Reader	This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date 27.04.2015 Revision: 27.04.2015

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Sheila Shine Low VOC (Aerosol)**

· **Article number:** No other identifiers.
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Polishing agent/ Burnishing compound
· **Uses advised against** Not determined

· **1.3 Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Sheila Shine Inc.
7725 W 2nd Court
Hialeah, FL 33014
Phone: (305) 557-1729

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

flame

Flam. Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.

health hazard

Carc. 1B	H350	May cause cancer.

environment

Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.

(Contd. on page 2)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date 27.04.2015 Revision: 27.04.2015

Trade name: Sheila Shine Low VOC (Aerosol)

(Contd. of page 1)

STOT SE 3 H336 May cause drowsiness or dizziness.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

T; Toxic

R45: May cause cancer.

Xi; Irritant

R36: Irritating to eyes.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

F+; Extremely flammable

R12: Extremely flammable.

N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R67: Vapours may cause drowsiness and dizziness.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurised container.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 percent of the mixture consists of component(s) of unknown toxicity

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).

GHS02 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Distillates (petroleum), hydrotreated heavy paraffinic

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date 27.04.2015 Revision: 27.04.2015

Trade name: Sheila Shine Low VOC (Aerosol)

(Contd. of page 2)

acetone
d-Limonene (citrus terpenes)

· **Hazard statements**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H350 May cause cancer.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P281 Use personal protective equipment as required.
P271 Use only outdoors or in a well-ventilated area.
P370+P378 In case of fire: Use foam, powder, or carbon dioxide for extinction.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**
Restricted to professional users.

· **Hazard description:**

· **WHMIS-symbols:**
B5 - Flammable aerosol
D2A - Very toxic material causing other toxic effects

· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 3
Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**
None of the ingredients are listed.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.

(Contd. on page 4)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date 27.04.2015 Revision: 27.04.2015

Trade name: Sheila Shine Low VOC (Aerosol)

(Contd. of page 3)

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 124-38-9 EINECS: 204-696-9	carbon dioxide Press. Gas L, H280	25-50%
CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8	acetone Xi R36; F R11 R66-67 Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	15-40%
CAS: 64742-47-8 EINECS: 265-149-8 Index number: 649-422-00-2	Distillates (petroleum), hydrotreated light Xn R65 Asp. Tox. 1, H304	15-40%
CAS: 64742-54-7 EINECS: 265-157-1 Index number: 649-467-00-8	Distillates (petroleum), hydrotreated heavy paraffinic Carc. 1B, H350	7-13%
CAS: 94266-47-4 EC number: 304-454-3	d-Limonene (citrus terpenes) Xi R38; Xi R43; N R50/53 R10 Flam. Liq. 3, H226 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Irrit. 2, H315; Skin Sens. 1, H317	1-5%
CAS: 119-36-8 EINECS: 204-317-7	methyl salicylate Xn R22 Acute Tox. 4, H302	1-5%

· **Additional information:**
For the wording of the listed risk phrases refer to section 16.
For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
In case of irregular breathing or respiratory arrest provide artificial respiration.

(Contd. on page 5)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date 27.04.2015 Revision: 27.04.2015

Trade name: Sheila Shine Low VOC (Aerosol)

(Contd. of page 4)

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Unlikely route of exposure.
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Coughing
Irritant to eyes.
Dizziness
Slight irritant effect on skin and mucous membranes.
Nausea
Gastric or intestinal disorders when ingested.
· **Hazards**
Vapours may cause drowsiness and dizziness.
Danger of disturbed cardiac rhythm.
Danger of impaired breathing.
Carcinogenic.
· **4.3 Indication of any immediate medical attention and special treatment needed**
Monitor circulation.
Medical supervision for at least 48 hours.
If necessary oxygen respiration treatment.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
Contains d-Limonene (citrus terpenes). May produce an allergic reaction.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Water haze or fog
Foam
Fire-extinguishing powder
Carbon dioxide
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Danger of receptacles bursting because of high vapour pressure when heated.
During heating or in case of fire poisonous gases are produced.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information**
Eliminate all ignition sources if safe to do so.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

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Cool endangered receptacles with water fog or haze.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
Keep people at a distance and stay on the windward side.
Particular danger of slipping on leaked/spilled product.
· **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Remove from the water surface (e.g. skim or suck off).
Ensure adequate ventilation.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
Used rags or other cleaning materials should be soaked with water and placed in a sealed container.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Use only in well ventilated areas.
Avoid splashes or spray in enclosed areas.
Rags / metal wools / cuttings / shavings and waste papers soaked with product must be placed in a sealed, metal container rated for flammable waste.
· **Information about fire - and explosion protection:**
Emergency cooling must be available in case of nearby fire.
Keep ignition sources away - Do not smoke.
Prevent impact and friction.
Flammable gas-air mixtures may form in empty receptacles.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.

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· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidising agents.
· **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
67-64-1 acetone	
IOELV (EU)	Long-term value: 1210 mg/m³, 500 ppm
PEL (USA)	Long-term value: 2400 mg/m³, 1000 ppm
REL (USA)	Long-term value: 590 mg/m³, 250 ppm
TLV (USA)	Short-term value: (1782) NIC-1187 mg/m³, (750) NIC-500 ppm Long-term value: (1188) NIC-594 mg/m³, (500) NIC-250 ppm BEI
EL (Canada)	Short-term value: 500 ppm Long-term value: 250 ppm
EV (Canada)	Short-term value: 750 ppm Long-term value: 500 ppm
124-38-9 carbon dioxide	
IOELV (EU)	Long-term value: 9000 mg/m³, 5000 ppm
PEL (USA)	Long-term value: 9000 mg/m³, 5000 ppm
REL (USA)	Short-term value: 54,000 mg/m³, 30,000 ppm Long-term value: 9000 mg/m³, 5000 ppm
TLV (USA)	Short-term value: 54,000 mg/m³, 30,000 ppm Long-term value: 9000 mg/m³, 5000 ppm
EL (Canada)	Short-term value: 15000 ppm Long-term value: 5000 ppm
EV (Canada)	Short-term value: 54,000 mg/m³, 30,000 ppm Long-term value: 9,000 mg/m³, 5,000 ppm
64742-47-8 Distillates (petroleum), hydrotreated light	
EL (Canada)	Long-term value: 200 mg/m³ Skin

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.

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· **Ingredients with biological limit values:**	
67-64-1 acetone	
BEI (USA)	50 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Do not carry product impregnated cleaning cloths in trouser pockets.
· **Respiratory protection:**
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
For spills, respiratory protection may be advisable.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No further relevant information available.
· **Risk management measures**
See Section 7 for additional information.

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No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Aerosol
Colour:	Colourless
· **Odour:**	Sweetish
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	>38 °C (>100 °F)
· **Flash point:**	53 °C (127 °F) (TOC)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	0,5 Vol % (estimated)
Upper:	13,0 Vol % (estimated)
· **Vapour pressure:**	Not determined.
· **Density at 20 °C (68 °F):**	0,845 - 0,855 g/cm³ (7,052 - 7,135 lbs/gal)
· **Relative density**	Not determined.
· **Vapour density at 20 °C (68 °F)**	> 1 (air = 1)
· **Evaporation rate at 20 °C (68 °F)**	< 1 (butyl acetate = 1)
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **9.2 Other information**	No further relevant information available.

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SECTION 10: Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Develops readily flammable gases/fumes.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Reacts with strong acids and oxidising agents.
Danger of receptacles bursting because of high vapour pressure when heated.
· **10.4 Conditions to avoid** Keep ignition sources away - Do not smoke.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**		
64742-47-8 Distillates (petroleum), hydrotreated light		
Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** Slight irritant effect on skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitisation:** Sensitisation possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
Danger through skin adsorption.
Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.
Carcinogenic.
Toxic and/or corrosive effects may be delayed up to 24 hours.
May cause cancer.
· **Acute effects (acute toxicity, irritation and corrosivity):** Vapours have narcotic effect.
· **Repeated dose toxicity:**
May cause damage to organs through prolonged or repeated exposure.
Repeated exposures may result in skin and/or respiratory sensitivity.
Repeated exposure may cause skin dryness or cracking.

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· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Carc. 1B

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** Toxic for aquatic organisms
· **12.2 Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:**
Toxic for fish
Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**
· **DOT, ADR, IMDG, IATA** UN1950

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· **14.2 UN proper shipping name**

· **DOT**	Aerosols, flammable, MARINE POLLUTANT
· **ADR**	1950 AEROSOLS, FLAMMABLE, ENVIRONMENTALLY HAZARDOUS
· **IMDG**	AEROSOLS, FLAMMABLE, MARINE POLLUTANT
· **IATA**	AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **DOT**

· **Class**	2.1
· **Label**	2.1

· **ADR**

· **Class**	2 5F Gases.
· **Label**	2.1

· **IMDG**

· **Class**	2.1
· **Label**	2.1

· **IATA**

· **Class**	2.1
· **Label**	2.1
· **14.4 Packing group**	
· **DOT, ADR, IMDG, IATA**	Not Regulated
· **14.5 Environmental hazards:**	Product contains environmentally hazardous substances: d-Limonene (citrus terpenes)
· **Marine pollutant:**	Yes Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Gases.
· **Danger code (Kemler):**	-
· **EMS Number:**	F-D,S-U

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· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 1 L
· **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity
· **Transport category** 1
· **Tunnel restriction code** D

· **IMDG**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity
· **UN "Model Regulation":** UN1950, AEROSOLS, FLAMMABLE, ENVIRONMENTALLY HAZARDOUS, 2.1

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

67-64-1	acetone	I

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· **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

67-64-1	acetone	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

119-36-8	methyl salicylate

· **Canadian Ingredient Disclosure list (limit 1%)**

67-64-1	acetone
124-38-9	carbon dioxide

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Other regulations, limitations and prohibitive regulations**
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

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R10 Flammable.
R11 Highly flammable.
R22 Harmful if swallowed.
R36 Irritating to eyes.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
Press. Gas L: Gases under pressure: Liquefied gas
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 1B: Carcinogenicity, Hazard Category 1B
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· **Sources**
SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

Material Safety Data Sheet

U.S. Department of Labor

Occupational Safety and Health Administration
(OSHA Non-Mandatory Form)

May be used to comply with

OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

Form Approved
OMB No. 1218-0072

IDENTITY *(As Used on Label and List)*	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
"SHEILA SHINE" (Aerosol)	

Section I

Manufacturer's Name SHEILA SHINE, INC.	**Emergency Telephone Number** CHEM-TEL, INC. (800) 255-3921
Address (Number, Street, City, State, and ZIP Code) 1201 NW First Ave.	**Telephone Number for Information** (800) 633-0481
Miami, FL	**Date Prepared** April 20, 2004
33138-2807	**Signature of Preparer** *(optional)*

SS146 LIQUID
SS1C 100z Aerosol

Section II - Hazard Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity Common Name(s)) (OSHA, 29 CFR 1910.1200)	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
Tuflo-10, CAS #64741-89-5	NA	NA	0.5 g/cu.m. (oil mist)	-
Xylene, CAS #1330-20-7	NA	100 ppm	NA	-
Carbon Dioxide, CAS #124-38-8	NA	5000 ppm	NA	-
Methyl Salicylate, CAS #119-36-8	NA	NA	NA	-
Perchloroethylene, CAS #127-18-6	NA	100 ppm	NA	-
Acetone, CAS #67-64-1	750 ppm	750 ppm	500 ppm DFG	-

All components are on ISCA list. Perchloroethylene is a suspected carcinogen.

Section III - Physical/Chemical Characteristics

Boiling Point (deg.C.)	> 80	Specific Gravity (H_2O = 1)	0.935
Vapor Pressure (mm Hg.)	3.9	Melting Point, deg.C.	NA
Vapor Density (AIR = 1)	3.4	Evaporation Rate: (Butyl Acetate = 1)	< 1
Solubility in Water Insoluble			
Appearance and Odor Clear colorless liquid with wintergreen fragrance.			

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) 59 deg. C (Tag Open Cup)	Flammable Limits	LEL NA	UEL NA
Extinguishing Media Dry chemical, foam			
Special Fire Fighting Procedures Wear self-contained breathing apparatus, helmet, shield, boots, and coat			
Unusual Fire and Explosion Hazards Isolate from oxidizers, open flame, and sparks.			

NOTE: **NFPA Rating: Health 2, Flammability 2, Reactivity 0**
HMIS Rating: Health 1, Flammability 2. Reactivity 0

(Reproduce locally) OSHA 174, Sept. 1985

Section V - Reactivity Data

Stability	Unstable		Conditions to Avoid Isolate from oxidizers, flame, sparks.
	Stable	Yes	Oxidizing agents. NA
Incompatibility *(Materials to Avoid)* Isolate from strong oxidizers, eg. chromates, peroxides, etc.			
Hazardous Decomposition or Byproducts Carbon monoxide, carbon dioxide			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	NA

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation Yes,	Skin? Yes	Ingestion? Yes
Health Hazards *(Acute and Chronic)* *Acute:* Inhalation: Remove to fresh air. Skin contact: Remove contaminated clothing, wash with soap and water for 15 minutes. Swallowing: Do not induce vomiting, seek medical help immediately. *Chronic:* Not known.			

X			
X			
X			
Carcinogenicity:	NTP? No	IARC Monographs? No	OSHA Regulated? Yes
X			

Signs and Symptoms of Exposure

Dizziness, nausea

NA

Medical Conditions Generally Aggravated by Exposure

Vomiting, diarrhea, irritation to eyes, nose, and throat.

May contribute to allergies.

Emergency and First Aid Procedures

For skin exposure, wash well with soap and water for 15 minutes.
For eye exposure, flush with copious quantities of water, and get medical attention..
For inhalation, remove to fresh air and give oxygen if breathing is difficult.
For ingestion, do not induce vomiting, get medical attention immediately.

X

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

Use absorbent material to soak up spill. Dike area if needed. Ventilate area, mop up material and dispose of material properly. Take hazard precautions in accordance with local, state, and federal regulations.

Waste Disposal Method

Dispose of material in accordance with local, state and federal regulations

Materials may be recycled.

Precautions to Be Taken in Handling and Storing

Store tight containers in cool, well-ventilated area.

X

Other Precautions

If large quantities are involved, use safety shower and eyewash fountain.

Section VIII - Control Measures

Respiratory Protection *(Specify Type)*		
If needed use respirator suitable for organic vapors.		
Ventilation AC or outdoors	**Local Exhaust** Hood or exhaust fan.	**Special** None
	Mechanical *(General)* Ordinary AC or exhaust fans.	**Other** None

Protective Gloves	Eye Protection
Chemical resistant.	Required.
Other Protective Clothing or Equipment	
Generally not needed.	
Work/Hygienic Practices	
Normal care and cleanliness.	

 * U.S.G.P.O. 1986-491 – 529/45775

SECTION IX: OTHER INFORMATION

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ALL DATA ARE PROVIDED WITHOUT WARRANTY, EXPRESS OR IMPLIED, REGARDING THEIR CORRECTNESS OR ACCURACY.

SHEILA SHINE, INC. AND APPLIED CONSUMER SERVICES, INC. SHALL NOT BE LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING, STORAGE, OR CONTACT WITH THE ABOVE PRODUCT. IT IS THE USER'S RESPONSIBLILITY BOTH TO DETERMINE SAFE CONDITIONS FOR THE USE AND HANDLING OF THE PRODUCT AND TO ASSUME LIABILITY FOR LOSS, INJURY, DAMAGE, OR EXPENSE RESULTING FROM THE USE OF THE PRODUCT.

INFORMATION COMPILED BY: Dr. Burch Stewart

DR. BURCH STEWART
APPLIED CONSUMER SERVICES, INC.

MATERIAL SAFETY DATA SHEET

920W355
11 00

DATE OF PREPARATION
Jan 9, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
920W355
PRODUCT NAME
SHELCOTE II Epoxy, Off White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
2	100-41-4	**Ethylbenzene**		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
13	1330-20-7	**Xylene**		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
1	95-63-6	**1,2,4-Trimethylbenzene**		
		ACGIH TLV	25 PPM	2.03 mm
		OSHA PEL	25 PPM	
3	107-98-2	**1-Methoxy-2-propanol**		
		ACGIH TLV	100 PPM	10.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
13	Proprietary	**Epoxy Polymer**		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
13	67924-34-9	**Epoxy Polymer**		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
15	14807-96-6	**Talc**		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	
22	7727-43-7	**Barium Sulfate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
15	13463-67-7	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic skin reaction in susceptible persons or skin sensitization.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
If irritation persists or occurs later, get medical attention.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
80 °F PMCC	1.0	13.7	RED LABEL -- Flammable, Flash below 100 °F (38 °C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use of barrier cream on exposed skin is recommended.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	13.76 lb/gal	1648 g/l
SPECIFIC GRAVITY	1.66	
BOILING POINT	248 - 337 °F	120 - 169 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	39%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

2.83 lb/gal	339 g/l	Less Water and Federally Exempt Solvents
2.83 lb/gal	339 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name			
100-41-4	**Ethylbenzene**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	**Xylene**			
		LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
95-63-6	**1,2,4-Trimethylbenzene**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
107-98-2	**1-Methoxy-2-propanol**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		6600. mg/kg
Proprietary	**Epoxy Polymer**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
67924-34-9	**Epoxy Polymer**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
14807-96-6	**Talc**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
7727-43-7	**Barium Sulfate**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
13463-67-7	**Titanium Dioxide**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. OR ORM-D
Larger Containers are Regulated as:
UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Ethylbenzene 1000 lb RQ
Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAINT, 3, PG III, (XYLENES (ISOMERS AND MIXTURE)), (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.
UN1263, PAINT, CLASS 3, PG III, (27 C c.c.), EmS F-E, S-E, ADR (D/E)

IATA/ICAO

UN1263, PAINT, 3, PG III

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene	13	
95-63-6	1,2,4-Trimethylbenzene	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B66T304
18 00

DATE OF PREPARATION
Oct 29, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B66T304
PRODUCT NAME
SHER-CRYL™ HPA High Performance Acrylic Gloss Coating, Clear Tint Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
2	111-77-3	**2-(2-Methoxyethoxy)-ethanol**		
		ACGIH TLV	Not Available	1 mm
		OSHA PEL	Not Available	
3	1332-58-7	**Kaolin**		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2
Flammability	0
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.76 lb/gal	1049 g/l
SPECIFIC GRAVITY	1.05	
BOILING POINT	212 - 500 °F	100 - 260 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	61%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.50 lb/gal	180 g/l	Less Water and Federally Exempt Solvents
0.71 lb/gal	85 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
TOXICOLOGY DATA

CAS No.	Ingredient Name			
111-77-3	2-(2-Methoxyethoxy)-ethanol			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5500 mg/kg
1332-58-7	Kaolin			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Material Safety Data Sheet

Revision Date: 09/07/2005

Section I. Product and Company Information

Emergency Contact: Chem*Tel (800) 255-3924

Product Name: **SHINE-O-GLASS**

Code: **0597**

Sold by: Theochem Laboratories Inc
7373 Rowlett Park Drive
Tampa FL 33610-1141

Shipping Description: COMBUSTIBLE LIQUIDS, N.O.S.
(Contains Isopropyl Alcohol)
C, NA1993, PG III
DEODORANT

NFPA Ratings:		HMIS Ratings:	
Health:	2 - Moderate	**Health:**	2 - Moderate
Fire:	2 - Moderate	**Fire:**	2 - Moderate
Reactivity:	0 - Minimal	**Reactivity:**	0 - Minimal

Section II. Hazardous Ingredients

Name	CAS #	% By Weight	OSHA PEL	ACGIN TCL	Other Limits
ISOPROPYL ALCOHOL	67-63-0	< 10%	400 PPM	400 PPM	N/A
BUTOXYETHANOL	111-76-2	<5%	50 PPM	25 PPM (skin)	N/A

**Indicates hazardous ingredients which are toxic chemicals subject to the reporting requirements of section 3013 of the emergency planning and community right-to-know act of 1986 and of 40 CFR 32*

Section III: Physical/Chemical Characteristics

Boiling Point:	212° F	Specific Gravity (Water = 1):	0.97
Vapor Pressure (mm.HG):	SAME AS WATER	Melting Point:	N/A
Vapor Density (Air = 1):	SAME AS WATER	Evaporation Rate (BuAc = I):	1.6
Solubility In Water:	COMPLETE	pH of Concenrate:	10.5 ± 0.3
Appearance and Odor:	THIN BLUE LIQUID WITH AMMONIA ODOR		

Section IV: Fire and Explosion Hazard Data

Flash Point (method used):	140° F (T.O.C.)	Flammable Limits:	N/A
LEL:	N/A	UEL:	N/A
Extinguishing Media:	CO2, DRY POWDER, WATER FOG, FOAM		
Special Firefighting Procedures:	LIQUID IS SOLUBLE IN WATER & EASILY DILUTED		
Unusual Fire & Explosion Hazards:	DO NOT CUT DRUM WITH TORCH AS EXPLOSION MAY RESULT		

Section V: Reactivity Data

Product Is:	STABLE
Conditions To Avoid:	N/A
Incompatibility (materials to avoid):	AVOID STRONG OXIDIZERS
Hazardous Decomposition or Byproducts:	N/A
Hazardous Polymerization:	WILL NOT OCCUR

Section VI: Health Hazard Data

Route(s) Of Entry:

Inhalation:	YES
Skin:	NO
Ingestion:	UNLIKELY
Health Hazards (Acute & Chronic):	WILL CAUSE IRRITATION TO EYES. PROLONGED SKIN CONTACT MAY CAUSE IRRITATION. INGESTION MAY CUASE HEADACHE & NAUSEA.

Carcinogencity: NTP: NO ARC Mongraphs: NO OSHA Regulated: NO

Signs & Symptoms Of Exposure: EYE OR SKIN IRRITATION

Medical Conditions Generally Aggravated by Exposure: PRE-EXISTING SKIN DISORDERS, EYE PROBLEMS OR IMPAIRED RESPIRATORY FUNCTION.

Emergency and First Aid Procedures

Skin Contact:
WASH WITH SOAP & WATER.

Eye Contact:
FLUSH WITH WATER FOR AT LEAST 15 MINUTES. SEEK CONTACT A PHYSICIAN.

Ingestion:
DO NOT INDUCE VOMITING. DRINK PLENTY OF WATER. SEEK IMMEDIATE MEDICAL ATTENTION

Inhalation:

Section VII: Precautions For Safe Handling And Use

Spill Steps:
USE ADEQUATE VENTILATION. FLUSH SPILLS WITH LARGE QUANTITIES OF WATER.

Waste Disposal Method:
PRODUCT IS BIODEGRADABLE. LLIQUID SPILL CAN BE MOPPED OR FLUSED TO SEWERS WITH PLENT OF WATER.

Storage & Handling:
STORE IN A DRY, COOL AREA AWAY FROM HEAT & SOURCES OF IGNITION. KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF REACH OF CHILDREN.

Section VIII: Control Measures

Respiratory Protection:	NONE FOR NORMAL VENTILATION WHERE TLV IS NOT EXCEEDED
Ventilation: Local Exhaust:	ADEQUATE
Special:	N/A
Mechanical:	N/A
Other:	N/A
Protective Gloves:	NOT REQUIRED
Eye Protection:	GLASSES OR GOGGLES
Other Protective Equip/clothing:	NONE
Work/hygienic Practices:	KEEP CONTAINER CLOSED WHEN NOT IN USE. WASH HANDS AFTER USE.

We believe the information given is accurate. It is offered in good faith, but without guarantee. Since conditions are beyond our control, user assumes all responsibility and risk.

MATERIAL SAFETY DATA SHEET

Dielectric #7

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Dielectric #7
Product Number:	C417-0287
Product Use:	Silicone grease.
Manufacturer/Supplier:	Chance Company 210 North Allen Street Centralia, Missouri U.S.A.
Phone Number:	(573) 682-8465
Emergency Phone:	(573) 682-8465
Date of Preparation:	December 31, 2010

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: Avoid getting in eyes. May cause mild eye irritation.

Skin: Not expected to be a primary skin irritant. Prolonged and/or repeated skin contact with this product may cause irritation.

Ingestion: May be harmful if swallowed. May act as a laxative.

Inhalation: May cause respiratory tract irritation.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: May cause mild eye irritation with redness and tearing. Handling can cause dry skin.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Siloxanes and Silicones, di-methyl, methylphenyl	63148-52-7	60 - 100
Silica, amorphous, fumed	7631-86-9	10 - 30

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial

respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, water spray, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Scoop up material and place in a disposal container. Provide ventilation.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container tightly closed and dry.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits OSHA-PEL	ACGIH-TLV
Siloxanes and Silicones, di-methyl, methylphenyl	Not available.	Not available.
Silica, amorphous, fumed	80 $mg/m^3/\%SiO_2$	10 mg/m^3

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Translucent, grease-like consistency.
Color:	Not available.
Odour:	No odor.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	> 149 °C (> 300 °F)
Flash Point:	> 204 °C (> 400 °F)
Evaporation Rate:	< 1 (Ether = 1)
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	<5 mm Hg @ 25 °C (77 °F)
Vapor Density:	Not available.
Specific Gravity:	1.06
Solubility in Water:	Insoluble (<1%).
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	<0.5 %
VOC content, wt. %:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Traces of formaldehyde and other thermal decomposition products may form at temperatures above 150°C (302°F) in the presence of air.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Strong oxidizers.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD_{50} (oral)	LC_{50}
Siloxanes and Silicones, di-methyl, methylphenyl	Not available.	Not available.
Silica, amorphous, fumed	5000 mg/kg, rat	> 2.2 mg/L 1hr, rat

Eye: Avoid getting in eyes. May cause mild eye irritation. May cause mild eye irritation with redness and tearing.

Skin: Not expected to be a primary skin irritant. Prolonged and/or repeated skin contact with this product may cause irritation. Handling can cause dry skin.

Ingestion: May be harmful if swallowed. May act as a laxative.

Inhalation: May cause respiratory tract irritation.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Not hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Siloxanes and Silicones, di-methyl, methylphenyl	Not listed.
Silica, amorphous, fumed	I-3

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
Not regulated

TDG Classification
Not regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Siloxanes and Silicones, di-methyl, methylphenyl	Not listed.	Not listed.	Not listed.	Not listed.
Silica, amorphous, fumed	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	Canada DSL/NDSL	USA TSCA
Siloxanes and Silicones, di-methyl, methylphenyl	DSL	Yes.
Silica, amorphous, fumed	DSL	Yes.

HMIS - Hazardous Materials Identification System

Health - 1 **Flammability -** 1 **Physical Hazard -** 0 **PPE –** B

NFPA - National Fire Protection Association:

Health - 1 **Fire -** 1 **Reactivity -** 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Not controlled.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Expiry Date: December 31, 2013

Version #: 1.0

Prepared by: Nexreg Compliance Inc.
Phone: (519) 488-5126
www.nexreg.com

PLANT MARVEL LABORATORIES, INC.
CHICAGO HEIGHTS, ILLINOIS
MATERIAL SAFETY DATA SHEET

PRODUCT NAME: SILK RENU® LIQUID PLANT CLEANER

SECTION I PRODUCT INFORMATION

Manufacturer: Plant Marvel Labs, Inc.
371 E. 16th Street
Chicago Heights, IL 60411

TELEPHONE NUMBERS:

Product Information:	**708-757-7500**
Transportation Emergency:	**800-535-5053**
Medical Emergency:	**800-752-7869**

SECTION II HAZARDOUS INGREDIENTS

Does product contain hazardous Ingredients? NO

Ingredients	CAS#
Trisodium Phosphate	7601-54-9
Sodium dodecylbenzene sulfonate	25115-30-0
Chelating Agent	1301-73-2
Propylene Glycol Methyl Ether 3-5	107-98-2

Does product contain carcinogens? (NTP/IARC/ORC) NO

SECTION III HEALTH HAZARD DATA

Effects of Overexposure:
Eye Contact: Irritation to eyes.
Skin Contact: Mild irritation.
Ingestion: Low toxicity. Ingestion of large quantities may cause diarrhea.
Inhalation: Spray mist or fog may cause irritation to nose, throat and lungs.

EMERGENCY FIRST AID PROCEDURES, QUICKLY FOLLOW PROCEDURES BELOW:

EYES - Flush eyes immediately with water for at least 15 minutes. Remove any contact lenses, then hold eyelids open and flush eyes thoroughly with water. Call a physician immediately.

SKIN CONTACT - Wash skin with plenty of soap and water. Wash clothing before reuse. If irritation persists, get medical attention.

INGESTION - Drink a quart of water and induce vomiting. Contact a physician.

INHALATION - Remove subject to fresh air. If distress persists, call a physician.

SECTION IV CHEMICAL DATA

Vapor Density (air=1) N/A
Solubility in Water 100%
Appearance and Odor Information: Clear purple liquid with mild odor.

SECTION V REACTIVITY DATA

Incompatibility (Materials to Avoid): Strong Acids (e.g. Muriatic Acid)
Hazardous Decomposition Products: Thermal decomposition may yield oxides of carbon.
Will Hazardous polymerization occur? No
Is the Product Stable? Yes

SECTION VI SPILL AND LEAK PROCEDURES

Steps to be taken in case material is released or spilled: Contain material. Soak or mop up spills.
Waste Disposal Method: Observe all Local, State and Federal Regulations. Undiluted, this product is regulated and RCRA for disposal as a corrosive material.

SECTION VII EXPOSURE CONTROL INFORMATION

Consult Safety Equipment Distributor.

Ventilation:	Maintain adequate ventilation. Do not use in confined or closed space. Substantial misting can be controlled with local exhaust.
Respiratory Protection:	If recommended exposure limits are exceeded wear NIOSH-approved self-contained breathing apparatus.
Eye Protection:	Safety Glasses with side shields.
Protective Gloves:	Rubber (Latex) to avoid contact during prolonged use.
Work Practices:	Always follow safe work practices.

SECTION VIII SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storage:
Store in dry, well-ventilated area, out of direct sunlight away from other chemicals and foodstuffs. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Protect from freezing.
Other Precautions:
Avoid contact with eyes. Do not swallow. Use with adequate ventilation. Wash thoroughly after handling.

The data in this Material Safety Data Sheet related only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation.

MATERIAL SAFETY DATA SHEET: SIMPLE GREEN®

also for : SIMPLE GREEN® SCRUBBING PAD

I. PRODUCT & COMPANY INFORMATION

Version No. 10012
Issue Date: January 2006

PRODUCT NAME: **SIMPLE GREEN® ALL-PURPOSE CLEANER**

SIMPLE GREEN® CONCENTRATED CLEANER / DEGREASER / DEODORIZER

SIMPLE GREEN® SCRUBBING PAD

COMPANY NAME: **SUNSHINE MAKERS, INC.**
15922 Pacific Coast Highway
Huntington Harbour, CA 92649 USA
Telephone: 800-228-0709 • 562-795-6000
Fax: 562-592-3034
Website: www.simplegreen.com

For 24-hour emergency, call Chem-Tel, Inc.: 800-255-3924

USE OF PRODUCT: An all purpose cleaner and degreaser used diluted in water for direct, spray, and dip tank procedures. (Scrubbing pad is used with water for manual scrubbing applications.)

II. INGREDIENT INFORMATION

The only ingredient of Simple Green® with established exposure limits is undiluted 2-butoxyethanol (<6%) (Butyl Cellosolve; CAS No. 111-76-2): the ACGIH TLV-TWA is 20 ppm (97 mg/m^3).

Based upon chemical analysis, Simple Green® contains no known EPA priority pollutants, heavy metals, or chemicals listed under RCRA, CERCLA, or CWA. Analysis by TCLP (Toxicity Characteristic Leaching Procedure) according to RCRA revealed no toxic organic or inorganic constituents.

All components of Simple Green® are listed on the TSCA Chemical Substance Inventory.

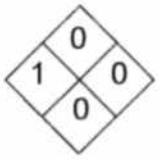
III. HAZARDS IDENTIFICATION

UN Number: Not required
Dangerous Goods Class: Nonhazardous

NJ TRADE SECRET REGISTRATION NUMBERS	
80100235-5000p	80100235-5005p
80100235-5001p	80100235-5006p
80100235-5002p	80100235-5007p
80100235-5003p	80100235-5008p
80100235-5004p	80100235-5009p

Hazard Rating (NFPA/HMIS)

Health = 1* Reactivity = 0
Fire = 0 Special = 0



Rating Scale

0 = minimal 1 = slight
2 = moderate 3 = serious
4 = severe

*Mild eye irritant, non-mutagenic and non-carcinogenic. **None of the ingredients in Simple Green® are regulated or listed as cancer agents by Federal OSHA, NTP, or IARC.**

IV. FIRST AID MEASURES

SYMPTOMS OF OVEREXPOSURE AND FIRST AID TREATMENT

Eye contact: Reddening may develop. Immediately rinse the eye with large quantities of cool water; continue 10-15 minutes or until the material has been removed; be sure to remove contact lenses, if present, and to lift upper and lower lids during rinsing. Get medical attention if irritation persists.

Skin contact: Minimal effects, if any; rinse skin with water, rinse shoes and launder clothing before reuse. Reversible reddening may occur in some dermal-sensitive users; thoroughly rinse area and get medical attention if reaction persists.

Swallowing: Essentially non-toxic. Give several glasses of water to dilute; do not induce vomiting. If stomach upset occurs, consult physician.

Inhalation: Non-toxic. Exposures to concentrate-mist may cause mild irritation of nasal passages or throat; remove to fresh air. Get medical attention if irritation persists.

V. FIRE FIGHTING MEASURES

Simple Green® is stable, not flammable, and will not burn.

Flash Point/Auto-Ignition:	Not flammable.
Flammability Limits:	Not flammable.
Extinguishing Media:	Not flammable/nonexplosive. No special procedures required.
Special Fire Fighting Procedures:	None required.

VI. ACCIDENTAL RELEASE MEASURES

Recover usable material by convenient method; residual may be removed by wipe or wet mop. If necessary, unrecoverable material may be washed to drain with large quantities of water.

VII. HANDLING, STORAGE & TRANSPORT INFORMATION

No special precautions are required. **This product is non-hazardous for storage and transport according to the U.S. Department of Transportation Regulations.** Simple Green® requires no special labeling or placarding to meet U.S. Department of Transportation requirements.

UN Number: Not required Dangerous Goods Class: Non-hazardous

VIII. EXPOSURE CONTROLS

Exposure Limits: The Simple Green® formulation presents no health hazards to the user when used according to label directions for its intended purposes. Mild skin and eye irritation is possible (please see Eye contact and Skin contact in Section IV.).

Ventilation: No special ventilation is required during use.

Human Health Effects or Risks from Exposure: Adverse effects on human health are not expected from Simple Green®, based upon twenty years of use without reported adverse health incidence in diverse population groups, including extensive use by inmates of U.S. Federal prisons in cleaning operations.

Simple Green® is a mild eye irritant; mucous membranes may become irritated by concentrate-mist.

Simple Green® is not likely to irritate the skin in the majority of users. Repeated daily application to the skin without rinsing, or continuous contact of Simple Green® on the skin may lead to temporary, but reversible, irritation.

Medical Conditions Aggravated by Exposure: No aggravation of existing medical conditions is expected; dermal sensitive users may react to dermal contact by Simple Green®.

IX. PERSONAL PROTECTION

Precautionary Measures:	No special requirements under normal use conditions.
Eye Protection:	**Caution, including reasonable eye protection, should always be used to avoid eye contact where splashing may occur.**
Skin Protection:	No special precautions required; rinse completely from skin after contact.
Respiratory Protection:	No special precautions required.
Work and Hygienic Practices:	No special requirements. Wash or rinse hands before touching eyes or contact lenses.

X. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/odor: Translucent green liquid with characteristic sassafras odor. (Scrubber is green fibrous rectangle.)
Specific Gravity: 1.0257 **Vapor Pressure:** 17 mm Hg @ 20 °C; 22 mm Hg @ 25 °C
pH of concentrate: 9.5 **Vapor Density:** 1.3 (air = 1)
Evaporation: >1 (butyl acetate = 1) **Density:** 8.5 lbs./gallon
Boiling Point: 110 °C (231 °F)
Freezing Point: -9 °C (16 °F) If product freezes, it will reconstitute without loss of efficacy when brought back to room temperature and agitated.
VOC Composite Partial Pressure: 0.006 mm Hg @ 20 °C
Volatile Organic Compounds (VOCs): 7.96 g/L per ASTM Method 3960-90. Per EPA Method 24, VOCs are 5.9% and product must be diluted at least 1 part of water to 1 part Simple Green® in order to meet CARB 2005 VOC regulations -or 1 part Simple Green to 3 parts water to meet SCAQMD Rule 1171 & Rule 1122 and BAAQMD Regulation 8-16 VOC requirements for solvent cleaning operations.
Water Solubility: Completely soluble in water. The higher salt concentrations in marine ecosystems will lead to complexes with Simple Green® that may become visible at ratios above one part Simple Green® to 99 parts seawater.
Ash Content: At 600 °F: 1.86% by weight.
Nutrient Content: Nitrogen: <1.0% by weight (fusion and qualitative test for ammonia).
Phosphorus: 0.3% by formula.
Sulfur: 0.6% by weight (barium chloride precipitation method).

Detection: Simple Green® has a characteristic sassafras odor that is not indicative of any hazardous situation.

XI. STABILITY AND REACTIVITY INFORMATION

Nonreactive. Simple Green® is stable, even under fire conditions, and will not react with water or oxidizers. Hazardous polymerization will not occur.

XII. TOXICOLOGICAL INFORMATION

Nonhuman Toxicity

Acute Mortality Studies:
Oral LD_{50} (rat): >5.0 g/kg body weight // Dermal LD_{50} (rabbit): >2.0 g/kg body weight

Dermal Irritation: Only mild, but reversible, irritation was found in a standard 72-hr test on rabbits. A value of 0.2 (non-irritating) was found on a scale of 8.

Eye Irritation: With or without rinsing with water, the irritation scores in rabbits at 24 hours did not exceed 15 (mild irritant) on a scale of 110.

Subchronic dermal effects: No adverse effects, except reversible dermal irritation, were found in rabbits exposed to Simple Green® (up to 2.0 g/kg/day for 13 weeks) applied to the skin of 25 males and 25 females. Only female body weight gain was affected. Detailed microscopic examination of all major tissues showed no adverse changes.

Fertility Assessment by Continuous Breeding: The Simple Green® formulation had no adverse effect on fertility and reproduction in CD-1 mice with continuous administration for 18 weeks, and had no adverse effect on the reproductive performance of their offspring.

XIII. BIODEGRADABILITY AND ENVIRONMENTAL TOXICITY INFORMATION

Biodegradability:
Simple Green® is readily decomposed by naturally occurring microorganisms. The biological oxygen demand (BOD), as a percentage of the chemical oxygen demand (COD), after 4, 7, and 11 days was 56%, 60%, and 70%, respectively. Per OECD Closed Bottle Test, Simple Green® meets OECD and EPA recommendations for ready biodegradability.
In a standard biodegradation test with soils from three different countries, Butyl Cellosolve reached 50% degradation in 6 to 23 days, depending upon soil type, and exceeded the rate of degradation for glucose which was used as a control for comparison.

Environmental Toxicity Information:
Simple Green® is considered practically non-toxic per EPA's aquatic toxicity scale. Simple Green® is non-lethal to any of the marine and estuarine test animals listed in the following table at concentrations below 200 mg/L (0.02%). This table shows the Simple Green® concentrations that are likely to be lethal to 50% of the exposed organisms.

	LC_{50} in mg/L (ppm)	
	48-hour	96-hour
Marine Fish:		
Mud minnow *(Fundulus heteroclitus)*	1690	1574
Whitebait *(Galaxias maculatus)*	210	210
Marine/Estuarine Invertebrates:		
Brine Shrimp *(Artemia salina)*	610	399
Grass Shrimp *(Palaemonetes pugio)*	270	220
Green-lipped Mussel *(Perna canaliculus)*	220	220
Mud Snail *(Potamopyrgus estuarinus)*	410	350

XIV. DISPOSAL CONSIDERATIONS

Simple Green® is fully water soluble and biodegradable and will not harm sewage-treatment microorganisms if disposal by sewer or drain is necessary. Dispose of in accordance with all applicable local, state, and federal laws.

XV. OTHER INFORMATION

Containers: Simple Green® residues can be completely removed by rinsing with water; the container may be recycled or applied to other uses.

Electrical Wiring Compatibility: Polyimide insulated wiring is not affected by exposure to Simple Green®. After immersion in Simple Green® for 14 days at 74°F, the 61 cm piece of polyamide insulated wire passed a one minute dielectric proof test at 2500 volts (ASTM D-149).

Contact Point: Sunshine Makers, Inc., Research and Development Division: 562-795-6000.

National Stock Numbers:

PART#	NSN	SIZE	PART#	NSN	SIZE
13012	7930-01-342-5315	24 oz. spray (12/cs)	13016	7930-01-342-5317	15 gal.
13005	7930-01-306-8369	1 gal. (6/cs)	13008	7930-01-342-4145	55 gal.
13006	7930-01-342-5316	5 gal.	Scrubbing Pad: 10224	7930-01-346-9148	Each (24/cs)

***** NOTICE *****

All information appearing herein is based upon data obtained by the manufacturer & recognized technical sources. Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of this information, Sunshine Makers, Inc. or its distributors extends no warranties, makes no representations and assumes no responsibility as to the suitability of such information for application to purchaser's intended purposes or for consequences of its use.

MATERIAL SAFETY DATA SHEET: SIMPLE GREEN®

also for : SIMPLE GREEN® SCRUBBING PAD

I. PRODUCT & COMPANY INFORMATION

Version No. 10012
Issue Date: January 2006

PRODUCT NAME: **SIMPLE GREEN® ALL-PURPOSE CLEANER**

SIMPLE GREEN® CONCENTRATED CLEANER / DEGREASER / DEODORIZER

SIMPLE GREEN® SCRUBBING PAD

COMPANY NAME: **SUNSHINE MAKERS, INC.**
15922 Pacific Coast Highway
Huntington Harbour, CA 92649 USA
Telephone: 800-228-0709 • 562-795-6000
Fax: 562-592-3034
Website: www.simplegreen.com

For 24-hour emergency, call Chem-Tel, Inc.: 800-255-3924

USE OF PRODUCT: An all purpose cleaner and degreaser used diluted in water for direct, spray, and dip tank procedures. (Scrubbing pad is used with water for manual scrubbing applications.)

II. INGREDIENT INFORMATION

The only ingredient of Simple Green® with established exposure limits is undiluted 2-butoxyethanol (<6%) (Butyl Cellosolve; CAS No. 111-76-2): the ACGIH TLV-TWA is 20 ppm (97 mg/m^3).

Based upon chemical analysis, Simple Green® contains no known EPA priority pollutants, heavy metals, or chemicals listed under RCRA, CERCLA, or CWA. Analysis by TCLP (Toxicity Characteristic Leaching Procedure) according to RCRA revealed no toxic organic or inorganic constituents.

All components of Simple Green® are listed on the TSCA Chemical Substance Inventory.

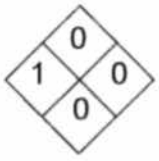
III. HAZARDS IDENTIFICATION

UN Number: Not required
Dangerous Goods Class: Nonhazardous

NJ TRADE SECRET REGISTRATION NUMBERS	
80100235-5000p	80100235-5005p
80100235-5001p	80100235-5006p
80100235-5002p	80100235-5007p
80100235-5003p	80100235-5008p
80100235-5004p	80100235-5009p

Hazard Rating (NFPA/HMIS)

Health = 1* Reactivity = 0
Fire = 0 Special = 0



Rating Scale

0 = minimal 1 = slight
2 = moderate 3 = serious
4 = severe

*Mild eye irritant, non-mutagenic and non-carcinogenic. **None of the ingredients in Simple Green® are regulated or listed as cancer agents by Federal OSHA, NTP, or IARC.**

IV. FIRST AID MEASURES

SYMPTOMS OF OVEREXPOSURE AND FIRST AID TREATMENT

Eye contact: Reddening may develop. Immediately rinse the eye with large quantities of cool water; continue 10-15 minutes or until the material has been removed; be sure to remove contact lenses, if present, and to lift upper and lower lids during rinsing. Get medical attention if irritation persists.

Skin contact: Minimal effects, if any; rinse skin with water, rinse shoes and launder clothing before reuse. Reversible reddening may occur in some dermal-sensitive users; thoroughly rinse area and get medical attention if reaction persists.

Swallowing: Essentially non-toxic. Give several glasses of water to dilute; do not induce vomiting. If stomach upset occurs, consult physician.

Inhalation: Non-toxic. Exposures to concentrate-mist may cause mild irritation of nasal passages or throat; remove to fresh air. Get medical attention if irritation persists.

V. FIRE FIGHTING MEASURES

Simple Green® is stable, not flammable, and will not burn.

Flash Point/Auto-Ignition:	Not flammable.
Flammability Limits:	Not flammable.
Extinguishing Media:	Not flammable/nonexplosive. No special procedures required.
Special Fire Fighting Procedures:	None required.

VI. ACCIDENTAL RELEASE MEASURES

Recover usable material by convenient method; residual may be removed by wipe or wet mop. If necessary, unrecoverable material may be washed to drain with large quantities of water.

VII. HANDLING, STORAGE & TRANSPORT INFORMATION

No special precautions are required. **This product is non-hazardous for storage and transport according to the U.S. Department of Transportation Regulations.** Simple Green® requires no special labeling or placarding to meet U.S. Department of Transportation requirements.

UN Number: Not required Dangerous Goods Class: Non-hazardous

VIII. EXPOSURE CONTROLS

Exposure Limits: The Simple Green® formulation presents no health hazards to the user when used according to label directions for its intended purposes. Mild skin and eye irritation is possible (please see Eye contact and Skin contact in Section IV.).

Ventilation: No special ventilation is required during use.

Human Health Effects or Risks from Exposure: Adverse effects on human health are not expected from Simple Green®, based upon twenty years of use without reported adverse health incidence in diverse population groups, including extensive use by inmates of U.S. Federal prisons in cleaning operations.

Simple Green® is a mild eye irritant; mucous membranes may become irritated by concentrate-mist.

Simple Green® is not likely to irritate the skin in the majority of users. Repeated daily application to the skin without rinsing, or continuous contact of Simple Green® on the skin may lead to temporary, but reversible, irritation.

Medical Conditions Aggravated by Exposure: No aggravation of existing medical conditions is expected; dermal sensitive users may react to dermal contact by Simple Green®.

IX. PERSONAL PROTECTION

Precautionary Measures:	No special requirements under normal use conditions.
Eye Protection:	**Caution, including reasonable eye protection, should always be used to avoid eye contact where splashing may occur.**
Skin Protection:	No special precautions required; rinse completely from skin after contact.
Respiratory Protection:	No special precautions required.
Work and Hygienic Practices:	No special requirements. Wash or rinse hands before touching eyes or contact lenses.

X. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/odor: Translucent green liquid with characteristic sassafras odor. (Scrubber is green fibrous rectangle.)
Specific Gravity: 1.0257 **Vapor Pressure:** 17 mm Hg @ 20 °C; 22 mm Hg @ 25 °C
pH of concentrate: 9.5 **Vapor Density:** 1.3 (air = 1)
Evaporation: >1 (butyl acetate = 1) **Density:** 8.5 lbs./gallon
Boiling Point: 110 °C (231 °F)
Freezing Point: -9 °C (16 °F) If product freezes, it will reconstitute without loss of efficacy when brought back to room temperature and agitated.
VOC Composite Partial Pressure: 0.006 mm Hg @ 20 °C
Volatile Organic Compounds (VOCs): 7.96 g/L per ASTM Method 3960-90. Per EPA Method 24, VOCs are 5.9% and product must be diluted at least 1 part of water to 1 part Simple Green® in order to meet CARB 2005 VOC regulations -or 1 part Simple Green to 3 parts water to meet SCAQMD Rule 1171 & Rule 1122 and BAAQMD Regulation 8-16 VOC requirements for solvent cleaning operations.
Water Solubility: Completely soluble in water. The higher salt concentrations in marine ecosystems will lead to complexes with Simple Green® that may become visible at ratios above one part Simple Green® to 99 parts seawater.
Ash Content: At 600 °F: 1.86% by weight.
Nutrient Content: Nitrogen: <1.0% by weight (fusion and qualitative test for ammonia).
Phosphorus: 0.3% by formula.
Sulfur: 0.6% by weight (barium chloride precipitation method).

Detection: Simple Green® has a characteristic sassafras odor that is not indicative of any hazardous situation.

XI. STABILITY AND REACTIVITY INFORMATION

Nonreactive. Simple Green® is stable, even under fire conditions, and will not react with water or oxidizers. Hazardous polymerization will not occur.

XII. TOXICOLOGICAL INFORMATION

Nonhuman Toxicity

Acute Mortality Studies:
Oral LD_{50} (rat): >5.0 g/kg body weight // Dermal LD_{50} (rabbit): >2.0 g/kg body weight

Dermal Irritation: Only mild, but reversible, irritation was found in a standard 72-hr test on rabbits. A value of 0.2 (non-irritating) was found on a scale of 8.

Eye Irritation: With or without rinsing with water, the irritation scores in rabbits at 24 hours did not exceed 15 (mild irritant) on a scale of 110.

Subchronic dermal effects: No adverse effects, except reversible dermal irritation, were found in rabbits exposed to Simple Green® (up to 2.0 g/kg/day for 13 weeks) applied to the skin of 25 males and 25 females. Only female body weight gain was affected. Detailed microscopic examination of all major tissues showed no adverse changes.

Fertility Assessment by Continuous Breeding: The Simple Green® formulation had no adverse effect on fertility and reproduction in CD-1 mice with continuous administration for 18 weeks, and had no adverse effect on the reproductive performance of their offspring.

XIII. BIODEGRADABILITY AND ENVIRONMENTAL TOXICITY INFORMATION

Biodegradability:
Simple Green® is readily decomposed by naturally occurring microorganisms. The biological oxygen demand (BOD), as a percentage of the chemical oxygen demand (COD), after 4, 7, and 11 days was 56%, 60%, and 70%, respectively. Per OECD Closed Bottle Test, Simple Green® meets OECD and EPA recommendations for ready biodegradability.
In a standard biodegradation test with soils from three different countries, Butyl Cellosolve reached 50% degradation in 6 to 23 days, depending upon soil type, and exceeded the rate of degradation for glucose which was used as a control for comparison.

Environmental Toxicity Information:
Simple Green® is considered practically non-toxic per EPA's aquatic toxicity scale. Simple Green® is non-lethal to any of the marine and estuarine test animals listed in the following table at concentrations below 200 mg/L (0.02%). This table shows the Simple Green® concentrations that are likely to be lethal to 50% of the exposed organisms.

	LC_{50} in mg/L (ppm)	
	48-hour	96-hour
Marine Fish:		
Mud minnow *(Fundulus heteroclitus)*	1690	1574
Whitebait *(Galaxias maculatus)*	210	210
Marine/Estuarine Invertebrates:		
Brine Shrimp *(Artemia salina)*	610	399
Grass Shrimp *(Palaemonetes pugio)*	270	220
Green-lipped Mussel *(Perna canaliculus)*	220	220
Mud Snail *(Potamopyrgus estuarinus)*	410	350

XIV. DISPOSAL CONSIDERATIONS

Simple Green® is fully water soluble and biodegradable and will not harm sewage-treatment microorganisms if disposal by sewer or drain is necessary. Dispose of in accordance with all applicable local, state, and federal laws.

XV. OTHER INFORMATION

Containers: Simple Green® residues can be completely removed by rinsing with water; the container may be recycled or applied to other uses.

Electrical Wiring Compatibility: Polyimide insulated wiring is not affected by exposure to Simple Green®. After immersion in Simple Green® for 14 days at 74°F, the 61 cm piece of polyamide insulated wire passed a one minute dielectric proof test at 2500 volts (ASTM D-149).

Contact Point: Sunshine Makers, Inc., Research and Development Division: 562-795-6000.

National Stock Numbers:

PART#	NSN	SIZE	PART#	NSN	SIZE
13012	7930-01-342-5315	24 oz. spray (12/cs)	13016	7930-01-342-5317	15 gal.
13005	7930-01-306-8369	1 gal. (6/cs)	13008	7930-01-342-4145	55 gal.
13006	7930-01-342-5316	5 gal.	Scrubbing Pad: 10224	7930-01-346-9148	Each (24/cs)

***** NOTICE *****

All information appearing herein is based upon data obtained by the manufacturer & recognized technical sources. Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of this information, Sunshine Makers, Inc. or its distributors extends no warranties, makes no representations and assumes no responsibility as to the suitability of such information for application to purchaser's intended purposes or for consequences of its use.

SAFETY DATA SHEET SlurryPRO® CDP

SECTION 1. IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 PRODUCT IDENTIFIER:

Product or Trade Name: **SlurryPRO® CDP**

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

Recommended Use(s)*: Deep foundations excavation fluid additive, drilling fluid additive, rheology modifier, filtrate control agent, membrane enhancer

* *The "Recommended Use(s)" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.*

Use Application(s): Professional Use Only

Recommended Restrictions: No restrictions on use known.

1.3 DETAILS OF THE SUPPLIER OF THE SUBSTANCE/MIXTURE AND SAFETY DATA SHEET:

Manufacturer/Supplier:

KB International LLC
735 Broad Street, Suite 209
Chattanooga, TN 37402 USA

Telephone Number: +1 (423) 266-6964

E-mail: info@kbtech.com

1.4 EMERGENCY CONTACT AND TELEPHONE NUMBER:

Emergency Contact: ChemTel, Inc.

Emergency Telephone Number: +1 (800) 255-3924

1.5 OTHER MEANS OF IDENTIFICATION:

Chemical Family: Propriety carbonyl acryl-amide copolymer

SECTION 2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

Classification according to Regulation (EC) No 1272/2008:

The substance is not classified as hazardous according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

Hazard Warnings:

- The product does not require a hazard warning label in accordance with EC Directives.

(This substance has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.)

Information Concerning Particular Hazards for Human and Environment:

- Heightened danger of slipping when the product is spilled on the floor.
- The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

- The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

According to Regulation 2012 OSHA Hazardous Communication Standard; 29 CFR Part 1910.1200:

Classification of the Product:

- No need for classification according to GHS criteria for this product.

2.2 LABEL ELEMENTS:

According to Regulation (EC) No. 1272/2008:

- The product is classified and labelled according to the CLP regulation.

According to Globally Harmonized System, (GHS):

- This product does not require a hazard warning label in accordance with GHS criteria for this product.

Labeling of Special Preparation(s):

- This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g., grinding, pulverizing) that reduce its particle size.
- High risk of slipping due to leakage/spillage of this product

According to Regulation 2012 OSHA Hazardous Communication Standard; 29 CFR Part 1910.1200:

Precautionary Statement(s):

General:

P103	Read label before use.

Prevention:

P250	Do not subject to grinding or friction.
P261	Avoid breathing dust.
P273	Avoid release to the environment.
P280	Wear protective gloves, clothing, and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.

Response:

P301/330/331/314 ...	IF SWALLOWED: Rinse mouth with water. Do NOT induce vomiting. Get medical advice or attention if you feel unwell.
P305/335/352/332/313	IF ON SKIN (or hair): Brush off loose particles from skin. Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice.
P304/340/342/315 ...	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get immediate medical attention.
P305/351/338/337/313	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
P306/362/364	IF ON CLOTHING: Take off contaminated clothing, and wash it before reuse.
P370/378	IN CASE OF FIRE: Use dry powder or foam to extinguish.
P391	Collect spillage.

Storage:

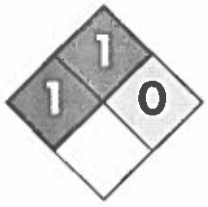
P402/404	Store in a dry place. Store in a closed container.

Disposal:

P501	Dispose of contents or container in accordance with local, regional, national, and/or international regulations.

2.3 HAZARD DESCRIPTIONS:

NFPA Ratings *(Scale 0 – 4)*:



Health = 1
Fire = 1
Reactivity = 0

HMIS Ratings *(Scale 0 – 4)*:

Health = 1
Flammability = 1
Physical Hazard = 0
Personal Protection = E

WHMIS 2015 - Symbols: Not hazardous under WHMIS.

Other Hazards: Not hazardous substance or mixture.

2.4 HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS:

Results of PBT and vPvB Assessment:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200:

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Emergency Overview:

Caution:

- Causes eye irritation.
- May cause some irritation to the respiratory system if dust is inhaled.
- The statements are based on the properties of the individual components.
- Wear NIOSH-certified chemical goggles.
- Use NIOSH approved respirator as needed to mitigate exposure.
- Caution - Slippery when wet!
- Wear protective clothing.
- Refer to MSDS Section 7 for Dust Explosion information.
- This type of product has a tendency to create dust if roughly handled. It does not burn readily but as with many organic powders, flammable dust clouds may be formed in air.
- Organic powders may be capable of generating static discharges and creating explosive mixtures in air. Handle with caution.
- Avoid creating dusty conditions, dust build-up or formation of dust clouds.
- Avoid all sources of ignition: heat, sparks, open flame.
- Caution - Slippery when wet!

Information Concerning Particular Hazards for Human and Environment:

- No Applicable

Note

- This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 COMPONENTS OF SUBSTANCE OR MIXTURE:

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

- This product does not contain any components classified as hazardous under the referenced regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

- No dangerous ingredients

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59).

- No applicable

SECTION 4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

After Clothing Contact:

- Remove contaminated clothing.
- Wash all soiled clothing before reuse.

After Ingestion:

- Have victim rinse mouth with water, then drink of water.
- Do not induce vomiting.
- Get medical advice or attention if you feel unwell.

After Inhalation:

- Remove person to fresh air and keep comfortable for breathing.
- If respiratory symptoms persists seek medical attention.

After Skin Contact:

- Brush off loose particles from skin.
- Wash with plenty of water.
- If skin irritation or a rash occurs get medical advice or attention.
- Wash all soiled clothing before reuse.

After Eye Contact:

- Wear appropriate protective equipment.
- Protect unharmed eye.
- If in contact with eyes, rinse cautiously with water for several minutes under running water with eyelids held open.
- Remove contact lenses, if present and easy to do and continue rinsing.
- If eye irritation persists get medical advise or attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Symptoms:

- The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
- Slight irritant effect on skin and mucous membranes.
- Gastric or intestinal disorders when ingested.
- Further important symptoms and effects are so far not known.

Hazards:

- No hazard is expected under intended use and appropriate handling.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Note To Physician:

Treatment:

- Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media:

- Dry powder, foam.

Unsuitable Extinguishing Media:

- Water jet.
- Carbon Dioxide

Additional Information:

- If water is used, restrict pedestrian and vehicular traffic in areas where slip hazard may exist.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE / CONDITIONS OF FLAMMABILITY:

Hazards During Fire-fighting:

- May form combustible dust concentrations in air.
- Not considered flammable.
- Formation of toxic gases is possible during heating or in case of fire.
- Carbon monoxide and carbon dioxide, nitrogen oxides (NOx) and ammonia.
- Very slippery when wet.

Flammability Classification (OSHA 29 CFR 1910.106):

- Not flammable.

Auto Ignition Temp:

- Non-combustible.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:

Protective Equipment for Firefighters:

- Wear a self-contained breathing apparatus.
- Wear full protective suit.

Special Fire-Fighting Procedures:

- The degree of risk is governed by the burning substance and the fire conditions.

Further Information:

- Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

5.4 IMPACT SENSITIVITY:

Assessment:

- Not shock-sensitive.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

- Use personal protective clothing.
- Keep unprotected persons away.
- Use respiratory protective device against the effects of fumes/dust/aerosol.
- Restrict access to area until completion of clean-up.
- All persons dealing with clean-up should wear the appropriate protective clothing and equipment.
- Ensure adequate ventilation.
- Avoid formation of dust.
- Product forms slippery surface when combined with water.
- Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

6.2 ENVIRONMENTAL PRECAUTIONS:

- Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.
- Do not discharge into drains, water courses or onto the ground.
- If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

For Small Amounts:

Dry Form:

For Small Amounts:

- Pick up with suitable appliance and dispose of.
- Pick up mechanically.
- Avoid raising dust.
- Dispose contaminated material as waste according to item 13.

For Large Amounts:

- Contain with dust binding material and dispose of.
- Pick up mechanically.
- Avoid raising dust.
- Send for recovery or disposal in suitable receptacles.
- Dispose contaminated material as waste according to item 13..

Wet Form:

- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Pick up mechanically.
- Send for recovery or disposal in suitable receptacles.
- Dispose contaminated material as waste according to item 13.

Further Accidental Release Measures:

- Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
- Avoid the formation and build-up of dust — danger of dust explosion.
- Dust in sufficient concentration can result in an explosive mixture in air.
- Non-sparking tools should be used.
- Handle to minimize dusting and eliminate open flame and other sources of ignition. Forms slippery surfaces with water.

6.4 REFERENCE TO OTHER SECTIONS:

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

- Prevent formation of dust.
- Any deposit of dust which cannot be avoided must be regularly removed.
- Use only in well ventilated areas.

- Use respiratory protective device against the effects of dust.
- Breathing must be protected when large quantities are decanted without local exhaust ventilation.
- Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
- Forms slippery surfaces with water.
- Handle in accordance with good industrial hygiene and safety practice.
- Obey all label warnings, especially during container cleaning.
- Do not remove label until container is thoroughly cleaned.
- Do not use container for food, feed or drinking water.

Protection Against Fire and Explosion:

- Avoid dust formation.
- Dust in sufficient concentration can result in an explosive mixture in air.
- Handle to minimize dusting and eliminate open flame and other sources of ignition.
- Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
- Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations.
- Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
- Protect from heat.
- Keep respiratory protective device available.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Storage:

Requirements to Be Met by Storerooms and Receptacles:

- Store only in the original receptacle.
- Avoid storage near extreme heat, ignition sources or open flame.
- Protect from humidity and water.

Information About Storage in One Common Storage Facility:

- Store away from foodstuffs.
- Do not store together with oxidizing and acidic materials.
- Do not store together with alkalis (caustic solutions).

Further Information on Storage Conditions:

- Store in unopened original containers in a cool and dry place.
- This product is hydroscopic.
- Avoid wet, damp or humid conditions, temperature extremes and ignition sources.

Unsuitable Materials for Containers:

- Aluminum

Storage Stability:

- Avoid extreme heat.

Protect from Temperatures Above:

- 70 °C (158 °F)

7.3 SPECIFIC END USE(S):

- Apart from the uses mentioned in section 1.2, no further relevant information available.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ADDITIONAL INFORMATION ABOUT DESIGN OF TECHNICAL SYSTEMS:

Appropriate Engineering Controls:

Advice on System Design:

- No further data; see section 7.

8.1 CONTROL PARAMETERS:

Components with Limit Values that Require Monitoring at the Workplace:

- Not required.

DNELs:

- No further relevant information available.

PNECs:

- No further relevant information available.

Components with Occupational Exposure Limits:

- Particles, not otherwise specified, respirable.
- Particles, not otherwise specified, inhalable.

Additional Information:

- The lists that were valid during the creation were used as basis.

8.2 EXPOSURE CONTROLS:

Engineering Controls:

- Provide appropriate exhaust ventilation at places where dust is formed.

Personal Protective Equipment:

General Protective and Hygienic Measures:

- The usual precautionary measures for handling chemicals should be followed.
- Keep away from foodstuffs, beverages and feed.
- Do not inhale dust
- Avoid contact with the eyes.
- Avoid long term contact with the skin.
- Ensure that washing facilities are available at the work place.

Respiratory Protection:

- Respiratory protection may not be required under normal operating conditions if adequate ventilation is provided.
- When applicable suitable respiratory protection for lower concentrations or short-term effect: Particle filter with medium efficiency for solid and liquid particles (e.g., EN 143, Type P2).
- For spills, respiratory protection may be advisable.

Body Protection:

- Light protective work clothing.

Hand Protection:

- *Chemical resistant protective gloves (EN 374).*
- *Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinyl chloride (0.7 mm) and other Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.*

Eye / Face Protection:

- Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Other Protective Equipment:

- An eyewash station and safety shower should be made available in the immediate working area.
- Other equipment may be required depending on workplace standards.

8.3 GENERAL SAFETY AND HYGIENE CONSIDERATIONS:

- Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation.
- Wearing of closed work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work.

Limitation and Supervision of Exposure into the Environment:

- No special environmental precautions required.

Risk Management Measures:

- See Section 7 for additional information.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:

Physical State:	Dry/Solid.
Form:	Granular to powder.
Color:	Clear, opaque to white / whit'sh.
Odor:	Oderless.

Odor Threshold (ppm):	Not determined.
Molecular Formula:	Trade Secret
Molecular Weight:	Trade Secret
Specific Gravity (water = 1):	Not Applicable
Bulk Density (at 20 °C or 68 °F):	Approx. 0.75 g/cm³ – (700 kg/m³) or 0.0253 lb/in³ – (5.84 lb/gal)
pH (Value):	7.0 - 9.0 (in 5% solution at 20 °C or 68 °F)
Change In Condition:	
Freeze Point:	Not determined.
Melting Point:	Not determined.
Melting Range:	Not determined.
Boiling Point:	Not determined.
Boiling Range:	Not determined.
Evaporation Rate:	The product is a non-volatile solid.
Flash Point (°C) [Closed cup]:	Not Applicable
Flammability (solid, gaseous):	Not highly flammable.
Danger of Explosion:	Product does not present an explosion hazard in its supplied form.
Explosive Properties:	
Lower Explosion Limit:	For solids not relevant for classification and labelling.
Upper Explosion Limit:	For solids not relevant for classification and labelling.
Auto-ignition Point (°C):	Not self-igniting
Auto-ignition:	400 °C (BAM) – 410 °C (BAM)
Minimum Ignition Energy (°C):	>999 mJ
Burning Number:	5
Dust Explosion Class:	St 1
Oxidizing Properties:	The substance or mixture is not classified as oxidizing.
Vapor Pressure (mm Hg):	The product has not been tested.
Vapor Density (Air=1):	No data available.
Relative Density (g/ml @ 20 °C):	No data available.
Solubility / Miscibility (Water):	Soluble (Forms a viscous solution.)
Solubility (Quantitative):	No data available.
Solubility (Qualitative):	No data available.
Partition Coefficient (n-octanol/water):	No data available.
Auto-ignition Point (°C):	Not self-igniting
Decomposition Temperature (°C):	No decomposition if used as directed.
Viscosity (mPa.s):	
Dynamic:	Not Applicable
Kinematic:	Not Applicable
Volatiles (% by weight):	Not determined.
Volatile Organic Compounds (VOC's):	Not Applicable
Absolute Pressure of Container:	Not Applicable
Flame Projection Length:	Not Applicable
Other Physical/Chemical Comments:	If necessary, information on other physical and chemical parameters is indicated in this section.

SECTION 10. STABILITY AND REACTIVITY

10.1 REACTIVITY:

- Stable under normal conditions of use and storage.
- No hazardous reactions if stored and handled as prescribed/indicated. 10.2 Chemical Stability:

Thermal Decomposition / Conditions to be Avoided:

- No decomposition if used and stored according to specifications.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS:

- As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.
- Reacts with strong oxidizing agents.
- Reacts with strong acids.

10.4 CONDITIONS TO AVOID:

- Avoid extreme heat.
- Avoid humidity.
- Avoid water.
- Avoid electro-static discharge.
- Avoid dust formation.
- Store away from acids and oxidizing agents.

10.5 INCOMPATIBLE MATERIALS:

- No further relevant information available.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

- Carbon monoxide and carbon dioxide
- Nitrogen oxides (NOx)
- Ammonia

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Acute Toxicity:

Primary Irritant Effect:

Inhalation:

- Product dust may be irritating to the respiratory system.

Skin:

- Slight irritant effect on skin and mucous membranes.

Eye:

- Irritating effect on eye.

Ingestion:

- Not expected to be irritating.

Sensitization:

- No sensitizing effects known.

Additional Toxicological Information:

- When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Assessment of Acute Toxicity:

- Based on the ingredients, there is no suspicion of a skin-sensitizing potential.

Aspiration Hazard:

- No aspiration hazard expected.

Chronic Toxicity/Effects:

Repeated Dose Toxicity:

Assessment of Repeated Dose Toxicity:

- Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statement has been derived from the properties of the individual components.

Genetic Toxicity:

Assessment of Mutagenicity:

- Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity:

Assessment of Carcinogenicity:

- The whole of the information assessable provides no indication of a carcinogenic effect.

Carcinogenic Categories:

IARC (International Agency for Research on Cancer)	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen.
OSHA - CA (Occupational Safety & Health Administration)	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
NTP (National Toxicology Program)	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
ACGIH (The American Conference of Governmental Industrial Hygienists)	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Reproductive Toxicity:

Assessment of Reproduction Toxicity:

- Based on the ingredients, there is no suspicion of a toxic effect on reproduction.

Other Information:

- The product has not been tested. The statements on toxicology have been derived from products of a similar structure and composition.

Symptoms of Exposure:

- No significant symptoms are expected due to the non-classification of the product.

Additional Toxicological Information:

- When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

SECTION 12. ECOLOGICAL INFORMATION

12.1 TOXICITY:

Aquatic Toxicity: No further relevant information available.

12.2 PERSISTENCE AND DEGRADABILITY:

- Biodegradable, Photodegradable.

12.3 BIOACCUMULATIVE POTENTIAL:

- No further relevant information available.

12.4 MOBILITY IN SOIL:

- No further relevant information available.

Additional Ecological Information:

General Notes:

- Water Hazard Class 1 (Self-Assessment): slightly hazardous for water.

Other Ecotoxicological Advice:

- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Do not contaminate any lakes, streams, ponds, groundwater or soil. Avoid flushing into drains. In the event of a large spillage contain product as thoroughly as possible and dispose of in accordance with local regulations.
- The product has not been tested.
- The statement has been derived from substances/products of a similar structure or composition.

12.5 RESULTS OF PBT AND VPVB ASSESSMENT:

PBT: Not applicable

VPVB: Not applicable

12.6 OTHER ADVERSE ECOLOGICAL EFFECTS:

- No further relevant information available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:

Unused Material and Residue:

Recommendations:

- Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- Smaller quantities can be disposed of with household waste.
- The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Uncleaned Packagings:

Recommendations:

- Disposal must be made according to official regulations.

Recommended Cleansing Agents:

- Water, if necessary together with cleansing agents.

RCRA:

- Not a hazardous waste under RCRA (40 CFR 261).

SECTION 14. TRANSPORTATION INFORMATION

14.1 UN Number: (DOT, ADR, ADN, IMDG, IATA)	Not Regulated
14.2 UN Proper Shipping Name: (DOT, ADR, ADN, IMDG, IATA)	Not Regulated
14.3 Transpot Hazard Class(es): (DOT, ADR, ADN, IMDG, IATA)	Not Regulated
14.4 Packing Group: (DOT, ADR, IMDG, IATA)	Not Regulated
14.5 Environmental Hazard(s): Marine Pollutant:	Not Regulated
14.6 Special Precautions for User:	No
14.7 Transport in Bulk According to Annex II of MARPOL73/78 & the IBC Code: UN "Model Regulation":	Not Regulated

Special Precautions for User:

- None reported by the manufacturer.

Environmental Hazards:

- See ECOLOGICAL INFORMATION, Section 12.

SECTION 15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE UNITED STATES (USA) COMPONENTS LISTED BELOW ARE PRESENT ON THE FOLLOWING U.S. FEDERAL CHEMICAL LISTS:

SARA:

Section 302 (Extremely Hazardous Substances Listings):	None of the chemical substances in this product are subject to reporting.
Section 311/312 (Hazardous Chemical Inventory):	No SARA Hazards
Section 355 (Extremely Hazardous Substances Listing):	None of the chemical substances in this product are listed.
Section 313 (Specific Toxic Chemical Listings):	None of the chemical substances in this product are listed.
TSCA (Toxic Substances Control Act):	All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.

Clean Air Act:

Section 12 (40 CFR 61):	This product does not contain any hazardous air pollutants (HAP)
Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):	None of the chemical substances in this product are listed.

Clean Water Act:

Section 311, Table 116.4A (List of Hazardous Substances):	This product does not contain any hazardous substances listed.
Section 311, Table 117.3 (Reportable Quantities of Hazardous Substances List):	None of the chemical substances in this product are listed.
Section 307 (Toxic and Priority Pollutants):	This product does not contain any toxic or priority pollutants.

Proposition 65 (California):

Chemicals Known to Cause Cancer:	None of the chemical substances in this product are listed.
Chemicals Known to Cause Reproductive Toxicity for Females:	None of the chemical substances in this product are listed.
Chemicals Known to Cause Reproductive Toxicity for Males:	None of the chemical substances in this product are listed.
Chemicals Known to Cause Developmental Toxicity:	None of the chemical substances in this product are listed.

Other U.S. States and Communities:

RTKHSL (Right to Know Hazardous Substance List):	None of the chemical substances in this product are listed.

Carcinogenic Categories:

EPA (Environmental Protection Agency):	None of the chemical substances in this product are listed.
IARC (International Agency for Research on Cancer):	None of the chemical substances in this product are listed.
TLV (Threshold Limit Value Established by ACGIH):	None of the chemical substances in this product are listed.
NIOSH-CA (National Institute for Occupational Safety and Health):	None of the chemical substances in this product are listed.

Canada:

DSL (Canadian Domestic Substances List):	All of the chemical substances in this product are either listed on the DSL Inventory or in compliance with a DSL exemption.
Canadian Ingredient Disclosure List (limit 0.1%):	None of the chemical substances in this product are listed.
Canadian Ingredient Disclosure List (limit 1.0%):	None of the chemical substances in this product are listed.

Other Regulations, Limitations and Prohibitive Regulations:

Substances of Very High Concern (SVHC) According to REACH, Article 57	None of the chemical substances in this product are listed.

Switzerland:

CH INV (New Notified Substances and Declared Preparations):	YES. The mixture contains a polymer. The monomers for this polymer have been notified.

Germany:

MAK (German Maximum Workplace Concentration):	None of the chemical substances in this product are listed.

Australia:

AICS (Australia Inventory of Chemical Substance):	YES. On the inventory, or in compliance with the inventory.

New Zealand:

NZIoC (New Zealand Inventory of Chemical Substances):	NO. On the inventory, or in compliance with the inventory.

Japan:

ENCS (Existing and New Chemical Substances Inventory):	YES. On the inventory, or in compliance with the inventory
ISHL - (Inventory of Chemical):	YES. On the inventory, or in compliance with the inventory

Korea:

KECI (Korean Existing Chemicals Inventory:	YES. On the inventory, or in compliance with the inventory.

Philippines:

PICCS (Philippines Inventory of Chemicals and Chemical Substances):	YES. On the inventory, or in compliance with the inventory.

China

IECSC (Inventory of Existing Chemical Substances in China):	YES. On the inventory, or in compliance with the inventory

For explanation of abbreviation see section 16.

Further Information:

- This product is to be considered as a preparation according to EU-legislation.

15.2 CHEMICAL SAFETY ASSESSMENT:

- A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

Abbreviations and acronyms:

ADRADR:	Accord Européen sur le Transport des Marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
AICS:	Australia Inventory of Chemical Substances
CA:	California
CAS:	Chemical Abstract Services (division of the American Chemical Society)
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR:	Code of Federal Regulations
CH INV:	Switzerland. New Notified Substances and Declared Preparations
CSA:	Canadian Standards Association
DNEL:	Derived No-Effect Level (REACH)
DOT:	Department of Transportation
DSL:	Canadian Domestic Substance List
ECHA:	European Chemical Agency
ENCS:	Japanese Existing and New Chemical Substances Inventory
EPA:	Environmental Protection Agency
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
HMIS:	Hazardous Materials Identification System
HSDB:	Hazardous Substances Data Bank
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organisation
IECSC:	Inventory of Existing Chemical Substances in China
IMDG:	International Maritime Dangerous Goods
Inh:	Inhalation
ISHL:	Japanese Inventory of Chemical Substances
KECI:	Korean Existing Chemicals Inventory
LC:	Lethal Concentration
LD:	Lethal Dose
MA:	Massachusetts
MAK:	German Maximum Workplace Concentration
MN:	Minnesota
NFPA:	National Fire Protection Association
NIOSH:	National Institute of Occupational Safety and Health
NJ:	New Jersey
NTP:	National Toxicology Program
NZIoC:	New Zealand Inventory of Chemical Substances
OSHA:	Occupational Safety and Health Administration
PA:	Pennsylvania
PEL:	Permissible Exposure Limit
PICCS:	Philippines Inventory of Chemicals and Chemical Substances
PNEC:	Predicted No-Effect Concentration (REACH)
RCRA:	Resource Conservation and Recovery Act
REACH:	EC 1907/2006
RI:	Rhode Island
RTECS:	Registry of Toxic Effects of Chemical Substances
SARA:	Superfund Amendments and Reauthorization Act
STEL:	Short Term Exposure Limit
TDG:	Canadian Transportation of Dangerous Goods Act & Regulations
TLV:	Threshold Limit Values
TSCA:	Toxic Substance Control Act
TWA:	Time Weighted Average
WHMIS:	Workplace Hazardous Materials Identification System

References:

Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM).
European Chemicals Agency, Classification Legislation, 2015
Material Safety Data Sheet from Manufacturer/Distributor.
OECD. Organization for Economic Co-operation and Development, 2015

Version 1.0	For the New GHS SDS Standard	Revision Date: 12/15/2014
Version 1.1	Hazard and Precautionary Statements	Revision Date: 02/04/2015
Version 1.2	Updated Graphics	Revision Date: 03/09/2015
Version 1.3	UN#, ICC GHS Edits	Revision Date: 05/20/2015
Version 1.4	Edits in Section 9	Revision Date: 05/21/2015
Version 1.5	Edits to Section 5	Revision Date: 06/02/2015
Version 1.6	Additions to Section 9	Revision Date: 06/25/2015

Other Special Considerations for Handling: Provide adequate information, instruction and training for operators.

Miscellaneous Hazard Classes:

Canadian Carcinogenicity Hazard Class: *Not Applicable.*

Physical Hazards Not Otherwise Classified (PHNOC): *Not Applicable.*

Health Hazards Not Otherwise Classified (HHNOC): *Not Applicable.*

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Current Document Titled: *Safety Data Sheet SlurryPRO® CDP*	**Supersedes Document Titled:** *SlurryPRO® CDP SDS o7/12/2017-gg-FV6ip13*
Current SDS Code: *"SlurryPRO® CDP SDS 107/31/2017-gg-ver6-rev14*	**Previous Document Date of Release:** 07/12/2-17
Revision Date: 07/12/2017	**Version No.** 6 **Revision No.** 14
Prepared By: K. Gifford Goodhue, Jr.	**Verified By:** Mark Walters on 07/31/2017
Issue Date: 07/31/2017	**Print Date:** 07/31/2017

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End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name

SNO BOL Liquid Disinfectant Toilet Bowl Cleaner
SNO BOL Thick Liquid Toilet Bowl Cleaner

EPA Reg. No. 10772-5
EPA Est. No. 55179-IN-1

Church & Dwight Co., Inc.
469 N. Harrison Street
Princeton, NJ 08540

Emergency Phone:
1-609-683-5900 (USA)

Medical Emergency Phone:
1-800-228-5635

2. COMPOSITION/INFORMATION ON INGREDIENTS

			CEILING EXPOSURE LIMITS (for hydrogen chloride)			
Ingredient	CAS No.	% By Wt.	OSHA	ACGIH	NIOSH	NIOSH IDLH
Hydrochloric Acid	7647-01-0	15%	⇒⇒⇒⇒	5 ppm (7.6 mg/m3)	⇐⇐⇐⇐	100 ppm

Contains no components reported to be carcinogenic by any reference source including IARC, OSHA, and NTP.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear blue liquid; wintergreen odor.
Can cause chemical burns to skin, eyes and mucous membranes.
Ingestion or inhalation can cause severe injury and possibly death.
Hazardous fumes will be generated if mixed with chlorine bleach, ammonia, or other household cleansers and chemicals.

This product is labeled in accordance with regulations administered by the Environmental Protection Agency (EPA). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this MSDS differ from the labeling requirements of the EPA and, as a result, this MSDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

HMIS Rating	
Health	3
Fire	0
Reactivity	0

Potential Health Effects

EYE: Can cause burns with impairment or permanent loss of vision.

SKIN CONTACT: Can cause severe irritation and chemical burns.

INGESTION: Harmful and may be fatal. Can cause mucous membrane and circumoral burns, abdominal pain and discomfort, perforation of the esophagus and gastrointestinal tract, necrosis of the stomach, respiratory distress (secondary to epiglottal swelling), shock, and renal failure.

INHALATION: Fumes can cause irritation with possible corrosive burns of the upper respiratory tract, pain and coughing, difficult breathing, headache, chemical pneumonitis, and pulmonary edema.

SUBCHRONIC EFFECTS/CARCINOGENICITY: None known. Ingredients are not listed as carcinogens or potential carcinogens by IARC, NTP, OSHA, or ACGIH.

4. FIRST AID MEASURES

SKIN: Immediately remove contaminated clothing. Immediately flush affected areas with a large amount of water until no evidence of product remains. Get medical attention if irritation develops and persists. Wash clothing before reuse.

EYES: Immediately flush eyes with large amounts of clean, flowing water, occasionally lifting upper and lower eyelids. Flush eyes for 15 minutes or until no evidence of product remains. Get immediate medical attention.

INHALATION: Immediately move from area of exposure to fresh air. Get medical attention if person has difficulty breathing. If breathing has stopped, give artificial respiration and get medical attention immediately. Keep affected person warm and at rest. Treat symptomatically and supportively.

INGESTION: Get immediate medical attention. Do not induce vomiting. If vomiting occurs, keep head below hips to prevent aspiration. Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. **Do not attempt to give anything orally to an unconscious person.**

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES	FLAMMABLE LIMITS
FLASHPOINT: Not Determined	LFL: Not Determined
METHOD USED: Not Applicable	UFL: Not Determined

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire. Use water to cool containers that an not be moved.

FIRE-FIGHTING INSTRUCTIONS: Keep upwind and avoid breathing corrosive vapors. Thermal decomposition may release corrosive hydrogen chloride. Apply cooling water in flooding amounts and from as far a distance as possible to sides of containers that are exposed to flames until well after fire is out. Water should not be used directly on material, but water spray can be used to absorb corrosive vapors. Wear proper full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA) with full face piece operated in positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None identified.

6. ACCIDENTAL RELEASE MEASURES

Isolate spill area and deny entry to unauthorized persons. Wear proper protective equipment (see Section 8) to prevent exposure to the spilled material. Stop the source of the leak if you can do so without risk. Ventilate the area. Dike to contain large spills. For all spills, neutralize with soda ash or lime. Take up with sand or other absorbent material and shovel into clean, dry containers. Cover containers and remove from area for later disposal as regulations permit (See Section 12). Flush spill area thoroughly with water.

7. HANDLING AND STORAGE

Store in original containers away from incompatible materials (See Section 10). Keep containers tightly closed. Do not store in carbon steel or aluminum containers. Prevent exposure to material during handling by wearing appropriate protective equipment (See Section 8).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Provide local exhaust ventilation to meet permissible exposure limits where fumes or vapors may be generated or released.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (Cont'd.)

RESPIRATORY PROTECTION: Air contamination monitoring should be conducted where fumes or vapors may be released or generated. If respiratory protection is required, wear a NIOSH/MSHA approved respirator appropriate for the type of contaminate and the contamination levels found in the workplace.

PROTECTIVE GLOVES: Chemical resistant gloves should be worn during occupational use conditions and for cleaning up spills to prevent skin contact.

EYE PROTECTION: Splash proof, chemical resistant safety goggles should be worn to prevent eye contact with this product during occupational use conditions or when cleaning up spills. Eyewash facility is recommended for the work area or in close proximity.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Impervious clothing should be worn during occupational use conditions to prevent skin contact with this product.

PROTECTIVE WORK/HYGIENIC PRACTICES: No special requirements with respect to chemical exposure beyond those noted above. Specific requirements with respect to equipment and applications are the responsibility of the handler/user.

9. PHYSICAL AND CHEMICAL P^{o} OPE^{o} TIES

APPEARANCE: Clear blue liquid
ODOR: Wintergreen odor
PHYSICAL STATE: Liquid
pH CONCENTRATE: 1.0 (approx.)
VAPOR PRESSURE: Not determined
VAPOR DENSITY: Not determined
BOILING POINT: > 200°F (> 93°C)
FREEZING POINT: Not determined
SOLUBILITY IN WATER: Complete
SPECIFIC GRAVITY (Water = 1): 1.0738 - 1.0753 @ 15^{0} C
APPARENT DENSITY: 8.95 lbs/gal @ 15^{0} C
% VOLATILES: Approximately 84%

N. STABILITY AND ^{o} EACTIVITY

CHEMICAL STABILITY: Stable under normal temperatures and pressures.

CONDITIONS TO AVOID: High temperature extremes and contact with incompatible materials.

INCOMPATIBILITY WITH OTHER MATERIALS: Highly reactive with strong bases, metals, metal oxides, hydroxides, mines, carbonates, and alkaline materials in general. Incompatible with cyanides, sulfides, sulfites, and formaldehyde.

OTHER PRECAUTIONS: DO NOT MIX with chlorine bleach, ammonia, or other household cleansers or chemicals. Do not use on chrome, countertops, bathtubs, washbowls, or other enamel surfaces.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may release corrosive hydrogen chloride.

HAZARDOUS POLYMERIZATION: Has not been reported to occur under normal temperatures and pressures.

11. HEALTH HAZARD INFORMATION

The acute health effects described below are those which could potentially occur for the finished product. They are based on the toxicology information available for the finished product and /or each hazardous ingredient, and are consistent with the product type and the likelihood of a specific route of exposure. Known chronic health effects related to exposure to a specific ingredient are indicated.

EYE EFFECTS: May cause burns with impairment or permanent loss of vision. Symptoms may include pain, tearing and photophobia.

SKIN EFFECTS: May cause irritation and chemical burns.

ACUTE ORAL EFFECTS: May cause mucous membrane and circumoral burns, excess drooling, difficulty in swallowing, pain upon swallowing, vomiting of blood, abdominal pain, perforation of the esophagus and gastrointestinal tract, necrosis of the stomach, respiratory distress (secondary to epiglottal swelling), shock, renal failure, and death.

INHALATION EFFECTS: Fumes may cause irritation with possible burns of the mucous membranes of the upper respiratory tract, conjunctivitis, bronchitis, immediate pain and coughing, choking, headache, dizziness, weakness, chemical pneumonitis, and pulmonary edema.

12. DISPOSAL CONSIDERATIONS

Dispose of spilled or waste product in accordance with all local, state and federal environmental regulations. State and local regulations may differ from federal. Be sure to consult with appropriate agencies for specific rules.

13. TRANSPORTATION INFORMATION

D.O.T. SHIPPING NAME: See product name.
D.O.T./E.P.A. HAZARD CLASS: ORM-D/Pesticide
APPLICABLE REGULATIONS: EPA 40 CFR 156, 157, 162; DOT 49 CFR 172, 173.154, 173.156.

14. REGULATORY INFORMATION

The ingredients in this product are reported in the U.S. EPA TSCA Inventory List.

CERCLA (40 CFR 302.4): Components present in this product at a level which could require reporting are: Hydrochloric Acid (hydrogen chloride) - RQ: 5000 pounds.

SARA TITLE III
Section 302, Extremely Hazardous Substances: None
Section 311/312, Hazard Category: Immediate (acute)
Section 313: Toxic chemical - This product is exempt from supplier notification.

SUPERSEDES DATE: 02/26/01

REASON FOR REVISION: Add Thick Formula.

This Product Safety Data Sheet is offered solely for your information, consideration and investigation. Church & Dwight Co., Inc. provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. Church & Dwight Co., Inc. urges persons receiving this information to make their own determination as to the information suitability for their particular application.

genesisalkali

SAFETY DATA SHEET

Sodium Carbonate, Anhydrous

SDS # : 497-19-8
Revision date: 2020-12-22
Format: NA
Version 5.09

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Soda Ash

Other means of identification

Product Code(s) 497-19-8

Synonyms Sodium carbonate, anhydrous; Carbonic acid, disodium salt; Disodium carbonate

Chemical Family Alkali salt

Recommended use of the chemical and restrictions on use

Recommended Use: Glass manufacture, Personal care, Detergent, Water treatment chemical, Chemical processing

Restrictions on Use: See section 16 for more information

Manufacturer Address

Genesis Alkali Wyoming, LP
1735 Market Street
Philadelphia, PA 19103
Tel: +1 877-362-2248 or +1 215-845-4500
www.alkali.genesisenergy.com

Emergency telephone number

1 307 / 872 2452 (Plant - Green River, WY)
1 303/ 389-1409 (Medical - U.S. - Call Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

Hazard Statements
H319 - Causes serious eye irritation

Precautionary Statements - Prevention
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statements - Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/ attention

Hazards not otherwise classified (HNOC)
No hazards not otherwise classified were identified.

Other Information
May be harmful if swallowed.
Prolonged or repeated contact may dry skin and cause irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Alkali salt.
Formula Na_2CO_3

Chemical name	CAS-No	Weight %
Sodium carbonate	497-19-8	100

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Skin Contact Wash off with warm water and soap. Get medical attention if irritation develops and persists. Remove and wash contaminated clothing before re-use.

Inhalation Remove person to fresh air. If signs/symptoms continue, get medical attention.

Ingestion Never give anything by mouth to an unconscious person Get medical attention if symptoms occur

Most important symptoms and effects, both acute and delayed	Causes serious eye damage / eye irritation.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing agent suitable for type of surrounding fire.
Specific Hazards Arising from the Chemical	Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes
Hazardous Combustion Products	Fumes of sodium oxide. Carbon oxides (COx).
Explosion data	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Not sensitive.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid dust formation. Sweep up to prevent slipping hazard.
Other	For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Prevent large quantities of this product from contacting vegetation or waterways. Cover with plastic sheet to prevent spreading. Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal.
Methods for cleaning up	Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling	Use air conveying/mechanical systems for bulk transfer to storage. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected. Make sure the locations of the eye washers and safety showers are close to the workstation locations.
Storage	Store in original container. Keep in properly labeled containers. Keep container tightly closed.
Incompatible products	Aluminum. Powdered aluminum. Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredient	Agency	Workplace Exposure Limits
Carbonic acid sodium salt (1:2)	OSHA PEL (TWA) (mg/m³)	10 mg/m³ Total dust; 5 mg/m³ Respirable fraction
Carbonic acid sodium salt (1:2)	MSHA	10 mg/m³ Total dust

8.2 Exposure

Appropriate engineering controls

Engineering measures Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear safety glasses or protective glasses with side shields. If splash potential exists, wear full face shield or chemical goggles.

Skin and Body Protection

Wear suitable protective clothing. Protective shoes or boots.

Hand Protection

Wear protective gloves. If handling solutions, impervious gloves recommended (e.g. Nitrile or Neoprene)

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Make sure the locations of the eye washers and safety showers are close to the workstation locations.

General information These recommendations apply to the product as supplied

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Granules
Physical State	Solid
Color	White
Odor	odorless
Odor threshold	Not applicable
pH	11.4 (1% solution in water)
Melting point/freezing point	851 °C
Boiling Point/Range	No information available
Flash point	Not applicable
Evaporation Rate	No information available
Flammability (solid, gas)	Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Density	No information available
Specific gravity	2.52
Water solubility	212.5 g/L @ 20 °C
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	400 °C

Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Oxidizing properties	Non-oxidizing
Molecular weight	105.99
Bulk density	0.86 - 1.12 g/cm³ (Dense grades) 0.70 - 0.90 g/cm³ (Light Grades)
K_{st}	0 bar m/s

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Chemical Stability Stable. Decomposes by reaction with strong acid.

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials Aluminum. Powdered aluminum. Acids.

Hazardous Decomposition Products Sodium oxides. Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral	2,800 mg/kg (rat)
LD50 Dermal	> 2,000 mg/kg (rabbit)
LC50 Inhalation	

Eye Contact	Irritating to eyes.
Skin Contact	Non-irritating
Sensitization	Patch test on human volunteers did not demonstrate sensitization properties.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity	No known effect.
Mutagenicity	No information available
Carcinogenicity	Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Sodium carbonate (497-19-8)				
Active Ingredient(s)	Duration	Species	Value	Units
Sodium Carbonate	96 h LC50	Bluegill sunfish	300	mg/L
Sodium Carbonate	48 h EC50	*Ceriodaphnia*	200-227	mg/L

Persistence and degradability	Biodegradability does not pertain to inorganic substances.
Bioaccumulation	Does not bio-accumulate.
Mobility	Dissociates into ions.
Other Adverse Effects	None known.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT	NOT REGULATED
TDG	NOT REGULATED
ICAO/IATA	NOT REGULATED
IMDG/IMO	NOT REGULATED

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

WARNING: *This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov .*

U.S. State Right-to-Know Regulations
This product is not listed on state right-to-know regulations

International Inventories

Component	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Sodium carbonate 497-19-8 (100)	X	X	X	X	X	X	X	X

Mexico - Grade Moderate risk, Grade 2

16. OTHER INFORMATION

NFPA	**Health Hazards** 2	**Flammability** 0	**Instability** 0	**Special Hazards** -
HMIS	**Health Hazards** 2	**Flammability** 0	**Physical hazard** 0	**Personal Protection** X

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Product Certifications

This product is certified to NSF/ANSI Standard 60 for use in drinking water treatment at the specified maximum use limit. The MUL (maximum use level) for sodium carbonate, anhydrous is 150 mg/L under NSF/ANSI Standard 60.

Halal: IFANCA

Revision date: 2020-12-22
Revision note Updated Section 2.

Disclaimer

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Prepared By:

Genesis Alkali, LLC

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End of Safety Data Sheet

COLGATE-PALMOLIVE Company
MATERIAL SAFETY DATA SHEET

This industrial Material Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Softsoap Cream Liquid Hand Soap

Effective Date: April 11, 2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COLGATE-PALMOLIVE COMPANY **300 Park Avenue** **New York NY 10022** PRODUCT NAME: Softsoap Cream Liquid Hand Soap CAS NUMBER: Not applicable – product is a mixture GENERAL USE: Formulated liquid hand soap	EMERGENCY TELEPHONE NUMBER: For emergency involving spill, leak, fire, exposure or accident, call CHEMTREC (800) 424-9300, day or night For MEDICAL EMERGENCIES involving this product call: (888) 489-3861

2. **COMPOSITION/INFORMATION ON INGREDIENTS** OSHA-REGULATED COMPONENTS (present at a concentration of > or = 1%): Component CAS# % PEL TLV Not Applicable	The following components, present at a concentration of > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA: Component CAS# % PEL TLV Not Applicable

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE CONTACT: Causes eye irritation on direct contact.

SKIN CONTACT: May cause skin irritation on prolonged or repeated contact.

INGESTION: May be harmful if swallowed in large quantities.

INHALATION: No adverse effects expected.

4. FIRST AID MEASURES

EYE CONTACT: Flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

SKIN CONTACT: Rinse area with plenty of water. Get medical attention if irritation persists.

INGESTION: Drink 1-2 glasses of water. Get medical attention.

INHALATION: Not Applicable.

5. FIRE FIGHTING MEASURES

Flash Point (Method): Not Applicable
Extinguishing Media: Water spray, all-purpose dry chemical, CO2.
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

7. HANDLING AND STORAGE

Store in a tightly closed container in a cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONTROLS: Avoid eye and skin contact.

PROTECTIVE CLOTHING: The use of safety goggles and protective gloves is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor:	Viscous liquid.
pH:	5.7 - 7.4

10. STABILITY AND REACTIVITY

GENERAL: This product is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS: None known.

HAZARDOUS DECOMPOSITION: None known.

11. TOXICOLOGICAL INFORMATION

This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the MSDS.

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with local, state, and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water or onto the ground.

14. TRANSPORTATION

Not regulated as a DOT hazardous material.

15. REGULATORY INFORMATION

RCRA (40 CFR 261, Subpart D): Not Applicable **CLEAN WATER ACT**: Not Applicable **CLEAN AIR ACT:** Contains diethanolamine which is a Section 112 material. Milk & Honey variant contains propylene glycol and sodium benzoate which are Section 111 materials. **SARA:** Sections 301-304 (Threshold planning quantity - TPQ) 40 CFR 355: Not Applicable **Section 313** (Toxic chemical release reporting) 40 CFR 372: The following chemicals must be reported under SARA 313: Not Applicable **CERCLA**: Section 102 (Reportable Quantity - RQ) 40 CFR 302: The Reportable Quantity (RQ) for this product to the environment is 50,000 lbs. based on the presence of diethanolamine (0.2%). Releases greater than or equal to 50,000 lbs. must be reported to the National Response Center (NRC) immediately: 800-424-8802.	**New Jersey Right to Know Hazardous Substance List:** This product contains the following components subject to reporting requirements: Diethanolamine **Pennsylvania Hazardous Substance List:** This product contains the following components subject to reporting requirements: Sodium sulfate, diethanolamine, glycerin; Milk & Honey variant contains propylene glycol **Massachusetts Substance List:** This product contains the following components subject to reporting requirements: Sodium sulfate, diethanolamine **Canada: Workplace Hazardous materials Information System (WHMIS)-listed material.** This product contains the following components subject to reporting requirements: Regular variant contains sodium lauryl sulfate

16. OTHER INFORMATION

Effective Date: April 11, 2006
Supersedes MSDS dated August 18, 2005
MSDS Status: Revised Section 15

The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

MATERIAL SAFETY DATA SHEET

S00857
01 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

S00857

HMIS CODES

Health	2
Flammability	2
Reactivity	0

PRODUCT NAME

SPRAYON® BLAST'EM® Wasp & Hornet Killer

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
Consumer Group - Industrial
Cleveland, OH 44115

EMERGENCY TELEPHONE NO.

(216) 566-2917

DATE OF PREPARATION

21-MAY-07

INFORMATION TELEPHONE NO.

(800) 251-2486

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
91	64742-47-8	Heavy Aliphatic Solvent		
		ACGIH TLV	Not Available	0.2 mm
		OSHA PEL	Not Available	
5	67-63-0	2-Propanol		
		ACGIH TLV	400 ppm	33 mm
		ACGIH TLV	500 ppm STEL	
		OSHA PEL	400 ppm	
		OSHA PEL	500 ppm STEL	
0.5	51-03-6	Piperonyl Butoxide		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
0.3	52645-53-1	Permethrin		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
2	124-38-9	Carbon Dioxide		
		ACGIH TLV	5000 ppm	760 mm
		OSHA PEL	5000 ppm	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.
May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Continued on page 2

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES:	Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN:	Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
INHALATION:	If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION:	Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
165 °F PMCC	0.7	12.7

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

This product is toxic to fish. Do not allow product to enter groundwater, streams, lakes or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

STORAGE CATEGORY

Not Available

Continued on page 3

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

Do not use in commercial food/feed handling establishments, restaurants or other sites where food/feed is commercially prepared or processed. Do not use in Federally Inspected meat and poultry plants.

Do not allow children or pets to contact treated surfaces until spray has dried. Do not spray air in rooms or use on plants. Avoid spraying vegetation directly. Apply as a surface spray only. Do not spray to contact food, feedstuffs or water supplies. Thoroughly wash dishes and food-handling utensils contaminated with this product. Remove pets and cover fish bowls before spraying.

Do not contaminate water, food or feed by storage or disposal. Do not store near heat or open flame. Store in cool area away from children.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read entire label.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear chemical-resistant gloves to prevent skin contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.54 lb/gal	783 g/l
SPECIFIC GRAVITY	0.79	
BOILING POINT	<0 - 500 F	<-18 - 260 C
MELTING POINT	Not Available	
VOLATILE VOLUME	99 %	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical)

Volatile Weight 96.65 % Less Water and Federally Exempt Solvents

Continued on page 4

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
64742-47-8	Heavy Aliphatic Solvent				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
67-63-0	2-Propanol				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5045 mg/kg
51-03-6	Piperonyl Butoxide				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
52645-53-1	Permethrin				
		LC50	RAT	4HR	Not Available
		LD50	RAT		410 mg/kg
124-38-9	Carbon Dioxide				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic invertebrates. Do not apply directly to water.

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 5

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)
May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, 2.2, LIMITED QUANTITY, (ERG#126)

Canada (TDG)
May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, CLASS 2.2, LIMITED QUANTITY, (ERG#126)

IMO
May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2, LIMITED QUANTITY, EmS F-D, S-U

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION
No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Safety Data Sheet: SS-80 PLUS AEROSOL

Supercedes Date 02/18/2013 **Issuing Date** 07/17/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name SS-80 PLUS AEROSOL
Recommended use Solvent mixture
Information on Manufacturer
CHEMSEARCH DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Product Code 5606
Chemical nature Halogenated hydrocarbon
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Colorless **Physical State** Liquid **Odor** Ether-like

GHS Classification

Physical Hazards

Gases under pressure	Compressed Gas

Health Hazard

Aspiration Toxicity	Category 1
Acute Inhalation Toxicity - Gas	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Carcinogenicity	Category 1B
Specific target organ systemic toxicity (single exposure)	Category 3
Specific target organ systemic toxicity (repeated exposure)	Category 1

Other hazards
None

Labeling
Signal Word
DANGER

Hazard Statements
H332 - Harmful if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H305 - May be harmful if swallowed and enters airways
H336 - May cause drowsiness or dizziness
H370 - Causes damage to liver, lungs, kidneys, heart, blood, cardiovascular system and nervous system through prolonged or repeated exposure
H350 - May cause cancer
H280 - Contains gas under pressure; may explode if heated

Precautionary Statements
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves, protective clothing and eye protection.
P210 - Keep away from heat, sparks, open flames or hot surfaces.
P251 - Pressurized container: Do not pierce or burn, even after use
P270 - Do not eat, drink or smoke when using this product
P260 - Do not breathe mist or vapor
P271 - Use in a well-ventilated area.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a physician if unwell.
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs, get medical attention.
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists, get medical attention.
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician if unwell.
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
P403 - Store in a well-ventilated place
P501 - Dispose of contents and container in accordance with applicable regulations.

4 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Tetrachloroethylene	127-18-4	30-60
Methylene chloride	75-09-2	15-40
Carbon dioxide	124-38-9	1-5
Propylene oxide	75-56-9	0.1-1
Carbon tetrachloride	56-23-5	0.1-1

4. FIRST AID MEASURES

General advice Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.

Skin Contact Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. Rinse mouth.

Notes to physician Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. May cause cardiac arrhythmia. Acidosis.

5. FIRE-FIGHTING MEASURES

Flash Point > 201 °F / > 94 °C **Method** Seta closed cup

Flammability Limits in Air % Solvent mixture. **Upper** 23 **Lower** 13

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO2). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions. Flame extension: 0 inches / 0 cm and Burnback: 0 inch / 0 cm.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Aerosol Level (NFPA 30B) - 1

NFPA	**Health** 2	**Flammability** 1	**Instability** 0
HMIS	**Health** 2	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water . Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Tetrachloroethylene	TWA: 25 ppm STEL: 100 ppm	TWA: 100 ppm Ceiling: 200 ppm	IDLH: 150 ppm
Methylene chloride	TWA: 50 ppm	TWA: 25 ppm STEL: 125 ppm	IDLH: 2300 ppm

Carbon dioxide	TWA: 5000 ppm STEL: 30000 ppm	TWA: 5000 ppm TWA: 9000 mg/m^3	IDLH: 40000 ppm STEL 30000 ppm STEL 54000 mg/m^3 TWA: 5000 ppm TWA: 9000 mg/m^3
Propylene oxide	TWA: 2 ppm	TWA: 100 ppm TWA: 240 mg/m^3	IDLH: 400 ppm
Carbon tetrachloride	TWA: 5 ppm Skin STEL: 10 ppm	TWA: 10 ppm Ceiling: 25 ppm	IDLH: 200 ppm STEL 2 ppm STEL 12.6 mg/m^3

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Colorless	**Odor**	Ether-like
Odor Threshold	Not applicable	**Appearance**	Transparent
pH	Not applicable	**Specific Gravity**	1.55
Bulk Density (lb/cu ft)	5.17	**Evaporation Rate**	95.2 (Butyl acetate=1)
Percent Volatile (Volume)	100	**VOC Content (%)**	0
VOC Content (g/L)	0	**Vapor Pressure**	3931.25 mmHg @ 70°F
Vapor Density	1.6 (Air = 1.0)	**Solubility**	Negligible
n-Octanol/Water Partition	No data available	**Melting Point/Range**	No data available
Decomposition Temperature	No data available	**Boiling Point/Range**	> 154 °F / 68 °C
Flammability (solid, gas)	No data available		
Flash Point	> 201 °F / > 94 °C	**Method**	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Solvent mixture.	**Upper** 23 **Lower** 13	

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid Keep away from open flames, hot surfaces, and sources of ignition

Incompatible Products Strong oxidizing agents, Strong bases, Powdered metals, Reducing agents, Amines.

Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Chlorine gas.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50 2,444.03

Dermal LD50 No information available

Inhalation LC50

Gas No information available

Mist 194.29

Vapor 6.71

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Inhalation, Skin Absorption.

Acute Effects

Eyes Severe irritation.

Skin Severe irritation. May be absorbed through the skin in harmful amounts.

Inhalation Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Irregular cardiac activity. Inhalation of vapors in high concentration can cause narcotic effects and metabolic acidosis.

Ingestion May cause central nervous system effects such as headache, dizziness, weakness, staggering gait, nausea, blurred vision, excitation, and in extreme cases, coma or death. Aspiration hazard if swallowed - can enter lungs and cause damage.

Chronic Toxicity Prolonged or repeated inhalation may cause damage to the lungs. Prolonged skin contact may defat

the skin and produce dermatitis. Liver and kidney injuries may occur. Contains a known or suspected carcinogen.

Target Organ Effects Respiratory system, Central nervous system, Cardiovascular system, Kidney, Liver, Blood.

Aggravated Medical Conditions Skin disorders, Respiratory disorders, Central nervous system, Kidney disorders, Liver disorders.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Tetrachloroethylene	= 2629 mg/kg (Rat)	no data available	= 4000 ppm (Rat) 4 h	no data available	no data available
Methylene chloride	> 2000 mg/kg (Rat)	no data available	no data available	no data available	no data available
Carbon dioxide	no data available	no data available	no data available	no data available	no data available
Propylene oxide	= 520 mg/kg (Rat)	no data available	= 4000 ppm (Rat) 4 h	no data available	no data available
Carbon tetrachloride	no data available	no data available	= 8000 ppm (Rat) 4 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Tetrachloroethylene	no data available	no data available	no data available	no data available	liver, kidneys, eyes, central nervous system, respiratory system, skin, cardiovascular system
Methylene chloride	no data available	no data available	no data available	no data available	skin, CVS, eyes, CNS (in animals: lung, liver, salivary and mammary gland tumors)
Carbon dioxide	no data available	no data available	no data available	no data available	respiratory system,CVS
Propylene oxide	no data available	skin sensitization	no data available	no data available	eyes, respiratory system, skin (in animals: nasal tumors), CNS, immune system
Carbon tetrachloride	no data available	no data available	no data available	no data available	CNS,eyes,lungs,liver,kidn

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Tetrachloroethylene	A3	Group 2A	Reasonably Anticipated	X	not applicable
Methylene chloride	A3	Group 2B	Reasonably Anticipated	X	not applicable
Carbon dioxide	not applicable	not applicable	not applicable	not applicable	not applicable
Propylene oxide	A3	Group 2B	Reasonably Anticipated	X	not applicable
Carbon tetrachloride	A2	Group 2B	Reasonably Anticipated	X	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Tetrachloroethylene	EC50 > 500 mg/L Pseudokirchneriella subcapitata 96 h	LC50 12.4 - 14.4 mg/L Pimephales promelas 96 h LC50 8.6 - 13.5 mg/L Pimephales promelas 96 h LC50 11.0 - 15.0 mg/L Lepomis macrochirus 96 h LC50 4.73 - 5.27 mg/L Oncorhynchus mykiss 96 h	EC50 = 100 mg/L 24 h EC50 = 112 mg/L 24 h EC50 = 120.0 mg/L 30 min	EC50 6.1 - 9.0 mg/L 48 h	2.53 - 2.88
Methylene chloride	EC50 > 500 mg/L Pseudokirchneriella subcapitata 96 h EC50 > 500 mg/L Pseudokirchneriella subcapitata 72 h	LC50 140.8 - 277.8 mg/L Pimephales promelas 96 h LC50 262 - 855 mg/L Pimephales promelas 96 h LC50 = 193 mg/L Lepomis macrochirus 96 h	EC50 = 1 mg/L 24 h EC50 = 2.88 mg/L 15 min	EC50 1532 - 1847 mg/L 48 h EC50= 190 mg/L 48 h	1.25
Carbon dioxide	no data available	no data available	no data available	no data available	N/A
Propylene oxide	EC50 = 240 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 215 mg/L Lepomis macrochirus 96 h	EC50 = 3300 mg/L 160 min	EC50= 350 mg/L 48 h	0.08
Carbon tetrachloride	EC50 = 830 mg/L Tetrahymena pyriformis 24 h	LC50 36.3 - 47.3 mg/L Pimephales promelas 96 h LC50 9.68 - 11.3 mg/L Pimephales promelas 96 h LC50 23 - 33 mg/L Lepomis macrochirus 96 h	EC50 = 34 mg/L 10 min EC50 = 5.6 mg/L 5 min	EC50= 28 mg/L 24 h EC50= 29 mg/L 48 h	2.75

Persistence and Degradability No information available.

Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of as hazardous waste in compliance with local and national regulations.
Container Disposal Warning! Container under pressure. Do not puncture. Empty remaining contents. Do not re-use empty containers. Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Consumer Commodity
Hazard Class ORM-D
Description Consumer Commodity, ORM-D

TDG

Proper shipping name Aerosols Aerosols
Hazard Class 2.2
UN-No UN1950
Description UN1950, Aerosols, 2.2

ICAO

UN-No UN1950
Proper Shipping Name Aerosols, non-flammable
Hazard Class 2.2
Shipping Description UN1950, Aerosols, non-flammable, 2.2, LTD QTY

IATA

UN-No UN1950
Proper Shipping Name Aerosols, non-flammable
Hazard Class 2.2
ERG Code 2L
Shipping Description UN1950, Aerosols, non-flammable, 2.2, LTD QTY

IMDG/IMO

Proper Shipping Name Aerosols, non-flammable
Hazard Class 2.2
UN-No UN1950
EmS No. F-D, S-U
Shipping Description UN1950, Aerosols, non-flammable, 2.2, LTD QTY

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Tetrachloroethylene	127-18-4	30-60	0.1
Methylene chloride	75-09-2	15-40	0.1
Propylene oxide	75-56-9	0.1-1	0.1
Carbon tetrachloride	56-23-5	0.1-1	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	Yes	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Tetrachloroethylene	100 lb	Not applicable
Methylene chloride	1000 lb	Not applicable
Carbon dioxide	Not applicable	Not applicable
Propylene oxide	100 lb	10000 lb TPQ

		100 lb
Carbon tetrachloride	10 lb	Not applicable

16. OTHER INFORMATION

Prepared By	Rachael Mohochi
Supercedes Date	02/18/2013
Issuing Date	07/17/2013
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Sheila Shine (Liquid)**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Polishing agent/ Burnishing compound

· **1.3 Details of the supplier of the Safety Data Sheet**

· **Manufacturer/Supplier:**
Sheila Shine Inc.
7725 W 2nd Court
Hialeah, FL 33014
Phone: (305) 557-1729

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

health hazard

Carc. 1B H350 May cause cancer.

environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

Skin Irrit. 2 H315 Causes skin irritation.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

T; Toxic

R45: May cause cancer.

Xi; Irritant

R38: Irritating to skin.

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N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).

GHS02 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Distillates (petroleum), solvent-refined light paraffinic
Distillates (petroleum), solvent-refined heavy paraffinic
tetrachloroethylene
ethylbenzene

· **Hazard statements**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H350 May cause cancer.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P281 Use personal protective equipment as required.
P202 Do not handle until all safety precautions have been read and understood.
P370+P378 In case of fire: Use foam, powder, or carbon dioxide for extinction.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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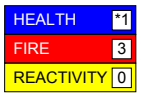
· **Additional information:**
Restricted to professional users.
· **Hazard description:**
· **WHMIS-symbols:**
B2 - Flammable liquid
D2A - Very toxic material causing other toxic effects

· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *1
Fire = 3
Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**	
100-41-4	ethylbenzene

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 64741-89-5 EINECS: 265-091-3 Index number: 649-455-00-2	Distillates (petroleum), solvent-refined light paraffinic Carc. 1B, H350	30-60%
CAS: 124-38-9 EINECS: 204-696-9	carbon dioxide Press. Gas, H280	25-50%
CAS: 127-18-4 EINECS: 204-825-9 Index number: 602-028-00-4	tetrachloroethylene Xn R40; N R51/53 Carc. Cat. 3 Carc. 2, H351 Aquatic Chronic 2, H411	10-30%

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CAS: 64741-88-4 EINECS: 265-090-8 Index number: 649-454-00-7	Distillates (petroleum), solvent-refined heavy paraffinic Carc. 1B, H350	10-30%
CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9	xylene Xn R20/21; Xi R38 R10 Flam. Liq. 3, H226 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	7-13%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4	ethylbenzene Xn R20; F R11 Flam. Liq. 2, H225 Carc. 2, H351 Acute Tox. 4, H332 Aquatic Chronic 3, H412	1-5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
In case of irregular breathing or respiratory arrest provide artificial respiration.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
A person vomiting while laying on their back should be turned onto their side.
· **4.2 Most important symptoms and effects, both acute and delayed**
Coughing
Dizziness
Breathing difficulty
Irritant to skin and mucous membranes.
Nausea
Slight irritant effect on eyes.
Gastric or intestinal disorders when ingested.
Disorientation

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· **Hazards**
Danger of disturbed cardiac rhythm.
Danger of convulsion.
Carcinogenic.
May be harmful if inhaled.
· **4.3 Indication of any immediate medical attention and special treatment needed**
Medical supervision for at least 48 hours.
If necessary oxygen respiration treatment.
Monitor circulation.
Treat skin and mucous membrane with antihistamine and corticoid preparations.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Water haze or fog
Foam
Fire-extinguishing powder
Carbon dioxide
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information**
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water fog or haze.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
Keep people at a distance and stay on the windward side.
Particular danger of slipping on leaked/spilled product.
· **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Remove from the water surface (e.g. skim or suck off).
Ensure adequate ventilation.
Send for recovery or disposal in suitable receptacles.

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Dispose contaminated material as waste according to item 13.
Used rags or other cleaning materials should be soaked with water and placed in a sealed container.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
Rags, metal wools / cuttings / shavings and waste papers soaked with product must be placed in a sealed metal container rated for flammable waste.

· **Information about fire - and explosion protection:**
Emergency cooling must be available in case of nearby fire.
Keep ignition sources away - Do not smoke.
Prevent impact and friction.
Flammable gas-air mixtures may form in empty receptacles.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
127-18-4 tetrachloroethylene	
PEL (USA)	Long-term value: 100 ppm Ceiling limit: 200; 300* ppm *5-min peak in any 3 hrs
REL (USA)	Minimize workplace exp. concs.;Pocket Guide App. A

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TLV (USA)	Short-term value: 685 mg/m³, 100 ppm Long-term value: 170 mg/m³, 25 ppm BEI
EL (Canada)	Short-term value: 100 ppm Long-term value: 25 ppm IARC 2A
EV (Canada)	Short-term value: 100 ppm Long-term value: 25 ppm
1330-20-7 xylene	
IOELV (EU)	Short-term value: 442 mg/m³, 100 ppm Long-term value: 221 mg/m³, 50 ppm Skin
PEL (USA)	Long-term value: 435 mg/m³, 100 ppm
REL (USA)	Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm
TLV (USA)	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI
EL (Canada)	Short-term value: 150 ppm Long-term value: 100 ppm
EV (Canada)	Short-term value: 650 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm
100-41-4 ethylbenzene	
IOELV (EU)	Short-term value: 884 mg/m³, 200 ppm Long-term value: 442 mg/m³, 100 ppm Skin
PEL (USA)	Long-term value: 435 mg/m³, 100 ppm
REL (USA)	Short-term value: 545 mg/m³, 125 ppm Long-term value: 435 mg/m³, 100 ppm
TLV (USA)	Long-term value: 87 mg/m³, 20 ppm BEI
EL (Canada)	Long-term value: 20 ppm IARC 2B
EV (Canada)	Short-term value: 540 mg/m³, 125 ppm Long-term value: 435 mg/m³, 100 ppm

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.

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· **Ingredients with biological limit values:**

127-18-4 tetrachloroethylene	
BEI (USA)	3 ppm Medium: end-exhaled air Time: prior to shift Parameter: Tetrachloroethylene 0,5 mg/L Medium: blood Time: prior to shift Parameter: Tetrachloroethylene
1330-20-7 xylene	
BEI (USA)	1,5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
100-41-4 ethylbenzene	
BEI (USA)	0,7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative) - Medium: end-exhaled air Time: not critical Parameter: Ethyl benzene (semi-quantitative)

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Do not carry product impregnated cleaning cloths in trouser pockets.
· **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Use suitable respiratory protective device when aerosol or mist is formed.
For spills, respiratory protection may be advisable.
NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.
· **Protection of hands:**

Protective gloves

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**
No further relevant information available.

· **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Colour:	Clear
· **Odour:**	Pleasant
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	234 °F / 112 °C
· **Flash point:**	133 °F / 56 °C (TOC)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.

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· **Explosion limits:**
Lower: 1,1 Vol % (estimated)
Upper: 7,0 Vol % (estimated)

· **Vapour pressure at 20 °C:** (Liquid) 10 mmHg ((Propellant) 838 psig)

· **Density at 20 °C:** 0,964 g/cm³
· **Relative density** Not determined.
· **Vapour density at 20 °C** > 1 (air = 1)
· **Evaporation rate at 20 °C** < 1 (butyl acetate = 1)

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not determined.
Kinematic: Not determined.
· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Develops readily flammable gases/fumes.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Used empty containers may contain product gases which form explosive mixtures with air.
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and oxidizing agents.
Reacts with certain metals.
· **10.4 Conditions to avoid** Keep ignition sources away - Do not smoke.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons
Chlorine compounds

(Contd. on page 11)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 01.08.2014 Revision: 01.08.2014

Trade name: Sheila Shine (Liquid)

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**		
127-18-4 tetrachloroethylene		
Oral	LD50	2629 mg/kg (rat)
1330-20-7 xylene		
Oral	LD50	4300 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Slight irritant effect on eyes.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
May be harmful if inhaled.
May cause acne.
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
May cause cancer.
· **Repeated dose toxicity:**
Repeated exposure may cause skin dryness or cracking.
May cause damage to organs through prolonged or repeated exposure.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Carc. 1B

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** Toxic for aquatic organisms
· **12.2 Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:**
Toxic for fish
Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.

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Safety Data Sheet
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Toxic for aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**
· **DOT, ADR, IMDG, IATA** UN1993
· **14.2 UN proper shipping name**
· **DOT** Flammable liquid n.o.s. (Ethylbenzene, Tetrachloroethylene)
· **ADR** 1993 FLAMMABLE LIQUID, N.O.S. (ETHYLBENZENE, TETRACHLOROETHYLENE), ENVIRONMENTALLY HAZARDOUS
· **IMDG** FLAMMABLE LIQUID, N.O.S. (ETHYLBENZENE, TETRACHLOROETHYLENE), MARINE POLLUTANT
· **IATA** FLAMMABLE LIQUID, N.O.S. (ETHYLBENZENE, TETRACHLOROETHYLENE)
· **14.3 Transport hazard class(es)**
· **DOT**

· **Class** 3 Flammable liquids.

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· **Label** 3

· **ADR**

· **Class** 3 (F1) Flammable liquids.
· **Label** 3

· **IMDG**

· **Class** 3 Flammable liquids.
· **Label** 3

· **IATA**

· **Class** 3 Flammable liquids.
· **Label** 3
· **14.4 Packing group**
· **DOT, ADR, IMDG, IATA** III
· **14.5 Environmental hazards:** Product contains environmentally hazardous substances: tetrachloroethylene
· **Marine pollutant:** Yes
Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)
· **14.6 Special precautions for user** Warning: Flammable liquids.
· **Danger code (Kemler):** 30
· **EMS Number:** F-E,S-E
· **Segregation groups** Liquid halogenated hydrocarbons
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
· **Transport category** 3
· **Tunnel restriction code** D/E

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· **IMDG**
· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
· **DOT** May be reclassified as Combustible Liquid for transport by highway or rail.
· **UN "Model Regulation":** UN1993, FLAMMABLE LIQUID, N.O.S. (ETHYLBENZENE, TETRACHLOROETHYLENE), ENVIRONMENTALLY HAZARDOUS, 3, III

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

127-18-4	tetrachloroethylene
1330-20-7	xylene
100-41-4	ethylbenzene

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

127-18-4	tetrachloroethylene
100-41-4	ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

127-18-4	tetrachloroethylene	L
1330-20-7	xylene	I
100-41-4	ethylbenzene	D

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Trade name: Sheila Shine (Liquid)

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· **IARC (International Agency for Research on Cancer)**		
127-18-4	tetrachloroethylene	2A
1330-20-7	xylene	3
100-41-4	ethylbenzene	2B

· **TLV (Threshold Limit Value established by ACGIH)**		
127-18-4	tetrachloroethylene	A3
1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
127-18-4	tetrachloroethylene

· **Canada**

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**	
100-41-4	ethylbenzene

· **Canadian Ingredient Disclosure list (limit 1%)**	
127-18-4	tetrachloroethylene

· **Other regulations, limitations and prohibitive regulations**
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· **Substances of very high concern (SVHC) according to REACH, Article 57**
None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H350 May cause cancer.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
R10 Flammable.
R11 Highly flammable.

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Trade name: Sheila Shine (Liquid)

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R20 Harmful by inhalation.
R20/21 Harmful by inhalation and in contact with skin.
R38 Irritating to skin.
R40 Limited evidence of a carcinogenic effect.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Press. Gas: Gases under pressure: Liquefied gas
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B
Carc. 2: Carcinogenicity, Hazard Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

· **Sources**
SDS Prepared by:
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Tampa, Florida USA 33602-2902
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Website: www.chemtelinc.com

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	HCS
	WHMIS Class E: Corrosive liquid. PRODUCT IS CONTROLLED UNDER PCP. WHMIS CLASS D-1: Material causing immediate and serious toxic effects.	HCS CLASS: Corrosive liquid.

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	**Stix** ✓
Synonym	Toilet Bowl/Porcelain/Shower Tile Cleaner
Chemical Family	Not available.
Chemical Formula	Not applicable.
Manufacturer/ Supplier	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607 (419) 241-2156
TSCA	**TSCA Inventory: All components listed or are exempt from listing.**
DSL	**DSL : All components listed unless noted elsewhere on this MSDS**

Code	76
CAS #	Not applicable.
Validation Date	**7/22/2003**
Print Date	7/28/2003
In Case of Emergency	Chemtrec (800) 424-9300

Protective Clothing

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC_{50}/LD_{50}
1) Water	7732-18-5	0-100	Not available.	Not available.
2) Phosphoric Acid	7664-38-2	20	TWA: 1 (mg/m^3) TWA: 1 (mg/m^3) from OSHA (PEL) [United States] STEL: 3 (mg/m^3)	Not available.
3) Nonionic Surfactant	9016-45-9	0-5	Not available.	Not available.
4) Xanthan Gum	11138-66-2	0-5	Not available.	ORAL (LD50): Acute: 5000 mg/kg [Rat].
5) Perfume Oil	100-52-7	0-5	Not available.	Not available.
6) Citric Acid	77-92-9	0-5	Not available.	Not available.
7) Nonionic Surfactant	61788-90-7	0-5	Not available.	ORAL (LD50): Acute: 4610 mg/kg [Rat].
8) Nonionic Surfactant	66455-15-0	0-5	Not available.	Not available.
9) Dye	N/A	0-5	Not available.	Not available.
10) Quaternary Ammonium Chloride	68424-85-1	0.05	Not available.	Not available.

Section 3. Hazards Identification

Potential Acute Health Effects	Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death.
Potential Chronic Health Effects	Prolonged exposure may result in skin burns and ulcerations. Severe over-exposure can produce lung damage, choking, unconsciousness or death.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 4610 mg/kg [Rat]. (Nonionic Surfactant).
Acute Effects on Humans	
Eyes	Severe eye irritant. Liquid or mist may burn or injure the eyes.
Skin	Severe skin irritant. Prolonged or repeated contact can cause chemical burns or dermatitis.
Inhalation	May be irritating to mucous membranes of the nose, throat, and lungs.
Ingestion	May be irritating to the mouth and throat. Large doses can cause nausea and vomiting.
Chronic Effects on Humans	Prolonged exposure may result in skin burns and ulcerations. Severe over-exposure can produce lung damage, choking, unconsciousness or death.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.

Section 14. Transport Information

DOT (U.S.A) (Pictograms)

TDG Classification Class 8: Corrosive material

PIN UN, Proper Shipping Name, PG 1760 Corrosive liquid n.o.s. PG II

Maritime Transportation Not available.

Special Provisions for Transport Not available.

Exposure Limits	**Phosphoric Acid** TWA: 1 (mg/m^3) TWA: 1 (mg/m^3) from OSHA (PEL) STEL: 3 (mg/m^3) Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
pH	1.5 to 2 [Acidic.]
Boiling/Condensation Point	88°C (190.4°F)
Melting/Freezing Point	Not available.
Critical Temperature	Not available.
Instability Temperature	Not available.
Specific Gravity	1.12 (Water = 1)
Vapor Pressure	<20 mm of Hg (@ 20°C)
Vapor Density	>1 (Air = 1)
Volatility	Not available.
VOC	Not available.
Evaporation Rate	<1 compared to Water
Dispersion Properties	See solubility in water.
Solubility	Easily soluble in cold water.
The Product is:	May be combustible at high temperature.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.
Explosion Hazards in Presence of Various Substances	Not applicable

Odor	Pleasant. (Slight.)
Taste	Not available.
Color	Clear Pink (Light.)

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Strong alkalis and oxidizers, reactive metals.
Hazardous Decomposition Products	Will not occur.

Section 4. First Aid Measures

Eye Contact	Hold eye open and rinse slowly and thoroughly with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor immediately for treatment advice.
Skin Contact	Remove contaminated clothing and shoes. Rinse skin with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for further treatment advice.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration., preferably mouth to mouth if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center immediately for treatment advice. Have person sip a glass of water if able to swallow. Do NOT induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

Section 5. Fire Fighting Measures

Products of Combustion	Not available.
Fire Fighting Media and Instructions	N/A
Special Remarks on Fire Hazards	N/A
Special Remarks on Explosion Hazards	N/A

Section 6. Accidental Release Measures

Small Spill and Leak	Chemical anti-splash goggles.
Large Spill and Leak	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 7. Handling and Storage

Precautions	Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. Never add water to this product. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.
Incompatibility	Strong alkalis and oxidizers, reactive metals.
Storage	Corrosive materials should be stored in a separate safety storage cabinet or room. Keep out of the reach of children. Not for use or storage in or around the home.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient to control airborne levels.
Personal Protection	
Eyes	Splash goggles.
Body	
Respiratory	Not applicable.
Hands	Gloves (impervious).
Protective Clothing (Pictograms)	

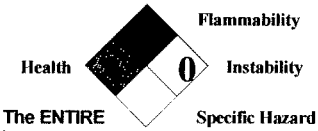
Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification)	WHMIS Class E: Corrosive liquid. PRODUCT IS CONTROLLED UNDER PCP. WHMIS CLASS D-1: Material causing immediate and serious toxic effects.	
Regulatory Lists	No products were found.	
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).	
Other Classifications	**HCS (U.S.A.)**	HCS CLASS: Corrosive liquid.
	USA Regulatory Lists	California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Ethylene Oxide <1 ppm California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Ethylene Oxide <1 ppm Massachusetts RTK: Ethylene Oxide SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Phosphoric Acid SARA 313 toxic chemical notification and release reporting: Phosphoric Acid
	DSD (EEC)	R35- Causes severe burns.
	International Regulations Lists	No products were found.

Hazardous Material Information System (U.S.A.)

Health	3
Flammability	0
Physical Hazard	0

National Fire Protection Association (U.S.A.)



The Hazard Ranking systems presented on this MSDS provide only a quick reference for hazard information. The ENTIRE MSDS must be consulted to determine any specific hazards, First Aid measures, and PPE associated with this product.

Section 16. Other Information

Validated by CRushton on 7/22/2003.

Verified by CRushton.

Printed 7/28/2003.

Information Contact

Betco Corporation
1001 Brown Avenue
Toledo, Ohio 43607
(419) 241-2156

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Continued on Next Page

PACER TECHNOLOGY
INDUSTRIAL • PRIVATE LABEL

MATERIAL SAFETY DATA SHEET

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Fax: (909) 987-0490· www.pacertechnology.com

FOR CHEMICAL EMERGENCY ONLY: **US & CANADA**: (800) 424-9300 **Int'l & Wash. DC**: (703) 527-3887

1. PRODUCT IDENTIFICATION:

Product ID	**Super Glue – SGH2, SGH2J, SGH22, SGH22J, SGH23, SGH24J, SGH3, SGM2, SGM22, SGM22J, SGP3, SGP33, SGPM3**

2. COMPOSITION/INGREDIENTS:

CHEMICAL NAME	CAS #	OSHA PEL	ACGIH TLV	Other Limits	Wt. %
Ethyl cyanoacrylate	7085-85-0	NE	0.2 ppm TWA	NE	85-100

3. HAZARDS IDENTIFICATION:

Emergency Overview

	HMIS	NFPA
Health	2	2
Flammability	2	2
Reactivity	1	1
Physical Hazard		

Clear, colorless liquid with irritating odor.
CAUTION: BONDS SKIN & EYES IN SECONDS. Irritating to eyes, respiratory system and skin. Avoid contact with clothing as can cause burn. Keep out of reach of children.

Toxicity	May cause allergic skin reaction with prolonged contact. Possible skin sensitizer.	
Primary routes of entry	**Inhalation** Yes	**Skin** No / **Eyes** Yes / **Ingestion** ---
Signs/Symptoms of Exposure	**Inhalation**	Coughing, wheezing, allergic-type reaction
	Skin	Possible redness, irritation; possible dermatitis with prolonged or repeated contact.
	Eyes	Weeping, redness, irritation
	Ingestion	Adhesive becomes solid in contact with saliva and may adhere to inside of mouth.

4. FIRST AID MEASURES:

Inhalation	Remove to fresh air. Prolonged or repeated elevated exposure may cause allergic reactions with asthma-like symptoms in sensitive individuals.
Skin	Wash with soap & water. Peel or roll skin apart to separate. Adhesive wears off of skin with water exposure.
Eyes	Immediately flush eyes with plenty of water for 15 minutes. Get immediate medical attention. Water flushing aids in sloughing off adhesive over time.
Ingestion	Peel or roll skin apart. Adhesive becomes solid in contact with saliva & may adhere to inside of mouth. Saliva will lift adhesive in 1-2 days. Additional water exposure helps to speed up removal. Avoid swallowing solid adhesive after detachment. Not a toxic product.

5. FIRE FIGHTING MEASURES:

FLASH POINT: 186 ^{0}F/ 86^{0}C **LEL: NE** **UEL: NE**

Extinguishing Media	Use dry chemical extinguisher or flush with large amounts of water.
Special Fire Fighting Procedures	As in any chemical fire, wear self-contained breathing apparatus, pressure-demand (NIOSH approved or equivalent) and full protective gear.
Hazardous Products of Combustion	Combustible by-products of carbon monoxide and carbon dioxide.
Unusual Fire/Explosion Hazards	Adhesive becomes solid in contact with water.

PACER TECHNOLOGY
INDUSTRIAL • PRIVATE LABEL

MATERIAL SAFETY DATA SHEET

Product ID	Super Glue – SGH2, SGH2J, SGH22, SGH22J, SGH23, SGH24J, SGH3, SGM2, SGM22, SGM22J, SGP3, SGP33, SGPM3

6. ACCIDENTAL RELEASE MEASURES:

Spill Procedures	Polymerize with water. Increase ventilation to area. Solid material may be scraped from surface.

7. HANDLING AND STORAGE:

Handling	Use in well-ventilated area. Avoid contact with eyes, skin and clothing. Avoid breathing (dust, vapor, mist). Avoid contact with skin, eye and clothing. Keep container closed when not in use. Protect work surfaces with metal foil.
Storage	Store in a cool place in original container and protect from sunlight. Keep away from sources of ignition. Ideal storage: 41-50F. Do not store with food products.

8. EXPOSURE CONTROL/PERSONAL PROTECTION:

EYES	SKIN	VENTILATION	OTHER
With possible eye/face contact, wear safety glasses.	Wear suitable protective clothing and gloves (neoprene).	Use in well-ventilated area or wear NIOSH full face respirator with carbon cartridges.	Facilities storing or utilizing this material should have an eyewash facility and a safety shower.

9. PHYSICAL & CHEMICAL PROPERTIES:

Appearance: Clear, transparent, colorless liquid	**Odor:** Irritating odor	**Boiling Point:** 365 F / 185 C
Specific Gravity (H_2O=1): 1.06	**Solubility in Water:** Insoluble, material becomes solid.	**Melting Point:** NE
Vapor Density (Air=1): NE	**Vapor Pressure (mm Hg):** 1 @ 20C	**Evaporation Rate (Butyl acetate=1):** NE
Volatile Organic Compounds-VOC (less exempt): <2% (< 20 g/L) – (per SCAQMD Method 316B – estimated)		

10. STABILITY & REACTIVITY:

Stable: _X__ yes _____ no	**Hazardous Polymerization: _____ may occur _X__ may not occur**
Incompatible materials:	Polymerized by water, alcohol, amines, alkaline materials and direct UV light.
Conditions to avoid:	Avoid temperatures above 176 F / 80 C, moisture and alkalines.
Hazardous decomposition products:	Carbon monoxide/dioxide and other toxic or irritating compounds. Oxides of nitrogen and probably hydrogen cyanide are also possible during combustion.

11. TOXICOLOGICAL INFORMATION:

Oral LD50 = >5000 mg/kg (rat)(estimated). Dermal LD50 = >2000 mg/kg (rabbit)(estimated).
Inhalation LC50 notes: Recommended TWA 0.2 ppm. Vapors may be irritating.

Hazardous components	Health effects/Target organs
Ethyl cyanoacrylate	Irritant, allergen, respiratory

12. ECOLOGICAL INFORMATION:

No known hazards.

13. DISPOSAL CONSIDERATIONS:

Polymerize with water to a solid material. Dispose of as solid waste or trash in accordance with local government regulations of the region.

14. SHIPPING:

DOT	Not regulated
IMDG	Not regulated
IATA	Not regulated (less than 500 mL) UN3334, AVIATION REGULATED LIQUID, N.O.S. (ethyl cyanoacrylate), 9

15. REGULATORY INFORMATION:

TSCA Status: All ingredients in this product are listed, or are exempt, for the TSCA Inventory list.
California Proposition 65: No California Proposition 65 chemicals are known to be present, or are intentionally added in the manufacture of this product.
Other: None known.

16. OTHER INFORMATION:

Abbreviations used in this document:
NA = not applicable
NE = not established

Preparation date: **04/10/14**
Revision number: **17**
Prepared by: **Mary Robles, Regulatory Affairs Manager**

The data contained herein is based upon information that Pacer Technology believes to be reliable. Users of this product have the responsibility to determine the suitability of use and to adopt all necessary precautions to ensure the safety and protection of property and persons involved in said use. All statements or suggestions are made without warranty, express or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof.

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Honeywell

SAFETY DATA SHEET

1. Identification

Product identifier	**Super salco detergent 1gal, 5 gal, 55 gal**
Other means of identification	
Product code	S4, S5, S55
Recommended use	Hand cleaner
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company name:	Salisbury by Honeywell
Address:	101 E Crossroads Parkway, Suite A Bolingbrook, Ilinois 60440
Telephone:	877-406-4501
Contact Person	hsptechsupport@honeywell.com
E-mail:	cssd@honeywell.com
Emergency telephone number:	+1-703-741-5500 for USA/Canada

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Causes skin irritation. Causes serious eye damage. Harmful to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Disodium metasilicate	6834-92-0	3.4
Alcohols, C9-11, ethoxylated	68439-46-3	3

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards This product is not flammable. No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Do not get this material in contact with eyes. Avoid contact with skin and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS). Rotate stock regularly.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Neoprene or butyl rubber gloves are recommended.
Skin protection	
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Light amber liquid.
Physical state	Liquid.
Form	Liquid.
Color	Light amber.
Odor	None.
Odor threshold	Not available.
pH	> 12.5
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	None.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	> 1.08 (Water=1)
Solubility(ies)	
Solubility (water)	Completely soluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	Reacts violently with strong acids. This product may react with oxidizing agents.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Temperatures greater than 120°F (49°C) or below 35°F (1.6°C). Contact with incompatible materials. Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizing agents.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms related to the physical, chemical and toxicological characteristics	Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Further information	No other specific acute or chronic health impact noted.

12. Ecological information

Ecotoxicity	Harmful to aquatic life with long lasting effects.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	This product is water soluble and may disperse in soil.
Other adverse effects	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 17-December-2015

Revision date -

Version # 01

NFPA ratings

List of abbreviations TWA: Time weighted average.
STEL: Short term exposure limit.

Disclaimer This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Material Safety Data Sheet

Revision Date: 03/06/2006

Section I. Product and Company Information

Emergency Contact: Chem*Tel (800) 255-3924

Product Name: **TB PLUS**
Code: **0323**
Sold by: Theochem Laboratories Inc
7373 Rowlett Park Drive
Tampa, FL 33610-1141

Shipping Description: DISINFECTANTS, LIQUID, CORROSIVE, N.O.S.
(Contains Quarternary Ammonium Compounds)
8, UN1903, PG III

NFPA Ratings:		HMIS Ratings:	
Health:	1 - Slight	**Health:**	1 - Slight
Fire:	0 - Minimal	**Fire:**	0 - Minimal
Reactivity:	0 - Minimal	**Reactivity:**	0 - Minimal

Section II. Hazardous Ingredients

Name	CAS #	% By Weight	OSHA PEL	ACGIH TLV	Other Limits
Diethylene Glycol Monobutylether	112-34-5	< 10%	N/E	N/E	N/A
Sodium Metasilicate	6834-92-0	< 3%	N/E	N/E	N/A
Quarternary Ammonium Compound Mixture	68391-01-5 27479-28-3	< 1%	N/E	N/E	N/A

**Indicates hazardous ingredients which are toxic chemicals subject to the reporting requirements of section 3013 of the emergency planning and community right-to-know act of 1986 and of 40 CFR 32*

Section III: Physical/Chemical Characteristics

Boiling Point:	212° F	Specific Gravity (Water = 1):	1.012
Vapor Pressure (mm.HG):	SAME AS WATER	Melting Point:	N/A
Vapor Density (Air = 1):	SAME AS WATER	Evaporation Rate (BuAc = I):	SAME AS WATER
Solubility In Water:		pH of Concentrate:	11.8 ± 0.3
Appearance and Odor:	THIN, COLORLESS LIQUID, BOUQUET ODOR.		

Section IV: Fire and Explosion Hazard Data

Flash Point (method used):	NONE	Flammable Limits:	N/A
LEL:	N/A	UEL:	N/A
Extinguishing Media:	NONE		
Special Firefighting Procedures:	NONE		
Unusual Fire & Explosion Hazards:	NONE		

Section V: Reactivity Data

Product Is:	STABLE
Conditions To Avoid:	N/A
Incompatibility (materials to avoid):	AVOID CONTACT WITH STRONG OXIDIZERS
Hazardous Decomposition or Byproducts:	WILL PRODUCE OXIDES OF CARBON IF INCINERATED
Hazardous Polymerization:	WILL NOT OCCUR

Section VI: Health Hazard Data

Route(s) Of Entry:

Inhalation:	YES
Skin:	NO
Ingestion:	UNLIKELY
Health Hazards (Acute & Chronic):	HARMFUL TO EYES. MAY CAUSE SKIN IRRITATIONON PROLONGED OR REPEATED CONTACT.HARMFUL IF SWALLOWED.
Carcinogencity:	NTP: NO
ARC Mongraphs:	NO
OSHA Regulated:	NO
Signs & Symptoms Of Exposure:	SKIN & EYE IRRITATION

Medical Conditions Generally Aggravated by Exposure: NONE KNOWN

Emergency and First Aid Procedures

Skin Contact:
REMOVE CONTAMINATED CLOTHING, LAUNDER BEFORE REWEARING. WASH WITH PLENTY OF WATER.

Eye Contact:
IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINS., SEEK MEDICAL ATTENTION IMMEDIATELY.

Ingestion:
DO NOT INDUCE VOMITING. CONTACT A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. OFFER SMALL AMOUNTS OF WATER OR MILK.

Inhalation:
N/A

Section VII: Precautions For Safe Handling And Use

Spill Steps:
CONTAIN LARGE SPILLS TO PREVENT WATER CONTAMINATION RECOVER PRODUCT FOR USE. ABSORB RESIDUES ON ABSORBENT MATERIAL SUCH AS SAWDUST.

Waste Disposal Method:
DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

Storage & Handling:
STORE IN A COOL, DRY AREA. KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF REACH OF CHILDREN.

Section VIII: Control Measures

Respiratory Protection:	NONE REQUIRED WITH ADEQUATE VENTILATION.
Ventilation: Local Exhaust:	ADEQUATE
Special:	N/A
Mechanical:	N/A
Other:	N/A
Protective Gloves:	RUBBER
Eye Protection:	GOGGLES
Other Protective Equip/clothing:	NONE REQUIRED FOR NORMAL USE.
Work/hygienic Practices:	KEEP CONTAINER CLOSED WHEN NOT IN USE. WASH HANDS AFTER USE.

We believe the information given is accurate. It is offered in good faith, but without guarantee. Since conditions are beyond our control, user assumes all responsibility and risk.

Material Safety Data Sheet

Section 1 – Product Identity

Product: Ten-Four Glove Dust, Catalog Number 10-4
Chemical name: Magnesium Silicate Hydrate
CAS No.: 14807-96-6
Manufacturer: W.H. Salisbury & Co.
7520 N. Long Ave.
Skokie Il 60077
877-406-4501 Fax.847-679-2401
Emergency Contact:CHEMTEL 1-800-255-3924 If outside the US:1-813-248-0585
www.whsalisbury.com

Section 2 – Composition

		Percent
Magnesium Silicate Hydrate	14807-96-6	99.5%
Methylparaben	99-76-3	less than 0.30%
Almond Fragrance		less than 0.11%

Talc (non-asbestiform) contains crystalline silica greater than 0.1%, but less than 1%. These levels are “typical” and may change slightly with different lots. IARC has determined silica to be a Class 1 carcinogen, and NTP has classified crystalline silica as a substance reasonably anticipated to be a carcinogen.

Section 3 – Health Hazard Data

Emergency Overview: Dust may cause mechanical irritation to eyes and respiratory tract.
Inhalation Acute Exposure Effects: Inhalation of dusts may cause sneezing, coughing, and nose irritation.
Inhalation Chronic Exposure Effects: Long term excessive exposures may cause talcosis, a pulmonary fibrosis which may lead to severe and permanent damage to the lung, possibly resulting in disability or death.
Skin Contact Acute Exposure Effects: The abrasiveness of talc may cause skin irritation.
Eye Contact Acute Exposure Effects: Abrasion may cause eye irritation.
Ingestion Acute Exposure Effects: May cause mild irritation of gastrointestinal tract.
Medical Conditions Aggravated by Exposure: Pre-existing chronic respiratory, skin, or eye diseases.
Symptoms: Inhalation – excessive sneezing or coughing. Skin contact – dryness and/or mild irritation. Eye contact – mild irritation. Ingestion – mild irritation.

Issued: 26 April 2005 - altered 1/16/07

Primary Route of Exposure: Inhalation, ingestion, skin contact, and eye contact.
Target Organs: Respiratory tract, eyes, skin.
Carcinogenicity: Magnesium Silicate Hydrate (Talc) is not listed with NTP, IARC, or OSHA as a known or suspected carcinogen.

Section 4 – First Aid Measures

Inhalation: Remove exposed person to fresh air. If symptoms such as excessive sneezing or coughing develop, seek medical attention.
Skin Contact: Wash from skin with mild soap and water.
Eye Contact: Flush eyes with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.
Ingestion: Ingestion should not cause significant health problems. If this material is ingested, and if the person is conscious, give large quantities of water to induce vomiting. Get medical attention.
Note to Physician: All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than Ten-Four Glove Dust may have occurred.

Section 5 – Fire Fighting Measures

Flash Point: N/A.
Upper Explosion Limit: N/A.
Lower Explosion Limit: N/A.
Auto Ignition Temperature: N/A.
Extinguishing Method: Material is non-combustible. Follow fire-fighting procedures for surrounding combustibles.
Fire and Explosion Hazards: Material is non-combustible and is not an explosion hazard.
Hazardous Combustion Products: None known.

NFPA Codes:		
	Health	1
	Flammability	0
	Reactivity	0

Section 6 – Accidental Release Measures

Clean up: Provide adequate ventilation. Cleanup personnel should use protective equipment to reduce eye contact, inhalation of dust and prolong skin contact. Use vacuum suction with HEPA filters to clean up spilled material. Use wet sweeping or a dust suppressant where sweeping is necessary. Personal safety, handling and exposure recommendations described elsewhere in this data sheet apply to exposure during clean up of spilled material and must be followed.

Section 7 - Handling and Storage

Storage: Store to minimize or avoid dust generation. Store in clean dry locations.
Handling: Avoid damaging container.

Section 8 – Personal Protection

Ventilation: Provide adequate exhaust ventilation to meet exposure limit requirements. An exhaust filter system may be required to avoid environmental contamination.
Respiratory Protection: When established airborne exposure limits are surpassed, wear NIOSH/MSHA approved respiratory equipment for dust such as the North Safety Products 7175N94 Disposable Respirator.
Eye Protection: Dust tight goggles such as North Safety Products Royale UV50™.
Exposure Limits:

Substance		PEL(mg/m^3)	TLV(mg/m^3)	REL(mg/m^3)
Silica	OSHA	0.10		
	MSHA	0.10		
	ACGIH		0.10	
	NIOSH			0.05
Talc	OSHA	2.0		
	MSHA	2.0		
	ACGIH		2.0	
	NIOSH			2.0

Note: PEL – Permissible Exposure Limit
TLV – Threshold Limit Value
REL – Recommended Exposure Limit

Issued: 26 April 2005 - altered 1/16/07

Section 9 – Physical and Chemical Properties

Specific Gravity: 2.7 (Approximately).
Solubility in Water: Insoluble.
Volatiles: N/A.
Appearance: White Power.
Odor: Almond.
Evaporation Rate: N/A.
Product State: Solid.

Section 10 – Stability and Reactivity

Incompatibilities: None in designed use.
Decomposition: None.
Polymerization: Hazardous polymerization will not occur.
Conditions to avoid: None known.
Stability: Stable under normal conditions.

Section 11 – Toxicological Information

Inhalation Effects: Rat inhalation, TC(LO) = 11(mg/m^3) administered intermittently over a year produces a toxic effect.
Dermal Effects: Rat implant TD(LO) =200(mg/m^3). Human skin 300 micrograms administered intermittently over a 3-day period produces mild irritation.
Eye Effects: None known.
Ingestion Effects: None known.
Other Effects: None known.

Section 12 – Disposal Considerations

Waste Disposal: If this material becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. State or local hazard waste regulations may apply if they are different from the Federal regulations. The user should be aware that combining this material with another could alter this classification.

Material Safety Data Sheet

Section 13 – Transportation Information

DOT Class: Not regulated by US Department of Transportation.
DOT Shipping Name: Talc.
DOT label: Not required.
Additional DOT Requirements: None.

Issued: 26 April 2005 - altered 1/16/07

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : TimeMist(R) Air Sanitizer

EPA ID Number: 10807-438

Material number : 000000000001046026

Manufacturer or supplier's details

Company : Amrep, Inc.

Address : 990 Industrial Park Drive
Marietta, GA 30062

Telephone : 404-352-1680

Emergency telephone numbers		
For SDS Information	:	Compliance Services 1-877-428-9937
For a Medical Emergency	:	877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency	:	CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

Recommended use of the chemical and restrictions on use

Recommended use : Air Care

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	colourless
Odour	pleasant

GHS Classification

Flammable aerosols : Category 2
Gases under pressure : Liquefied gas
Eye irritation : Category 2A
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H223 Flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/ face protection.
Response:
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Storage:
P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
P403 Store in a well-ventilated place.
Disposal:
Dispose of contents/container in accordance with local regulation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration [%]
propan-2-ol	67-63-0	>= 30 - < 50
1,1-difluoroethane	75-37-6	>= 30 - < 50
butane	106-97-8	>= 10 - < 20
1,1'-oxydipropan-2-ol	110-98-5	>= 1 - < 5

The exact percentages of disclosed substances are withheld as trade secrets.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.
If on clothes, remove clothes.

In case of eye contact	:	Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. If in eyes, rinse with water for 15 minutes.
If swallowed	:	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray jet Carbon dioxide (CO2) Alcohol-resistant foam Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Smoke Carbon dioxide (CO2) Carbon monoxide Smoke Fluorine compounds
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Do not breathe vapours or spray mist.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
Always replace cap after use.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
No smoking.
Observe label precautions.
Keep in a dry, cool and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Store and keep away from bases and alkalies.
Do not store near acids.
Oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm	OSHA P0

			1,225 mg/m3	
		PEL	400 ppm 980 mg/m3	CAL PEL
		STEL	500 ppm 1,225 mg/m3	CAL PEL
1,1-difluoroethane	75-37-6	TWA	1,000 ppm	US WEEL
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
		PEL	800 ppm 1,900 mg/m3	CAL PEL

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
PROPAN-2-OL	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Engineering measures : Not applicable

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aerosol containing a liquefied gas

Colour : colourless

Odour	:	pleasant
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Evaporation rate	:	not determined
Flammability (solid, gas)	:	Flammable aerosol.
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1.04 g/cm3
Solubility(ies)		
Water solubility	:	partly soluble
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Vapours may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Extremes of temperature and direct sunlight. Heat, flames and sparks.
Incompatible materials	:	Acids Bases Oxidizing agents
Hazardous decomposition products	:	Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Carcinogenicity:

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Components:

propan-2-ol:
Acute oral toxicity : LD50 Oral Rat: 4,396 mg/kg
Method: Calculation method

1,1-difluoroethane:
Acute inhalation toxicity : LC50 Mouse: 977,000 mg/l
Exposure time: 2 h

butane:
Acute inhalation toxicity : LC50 Mouse: 1,237 mg/l
Exposure time: 2 h

LC50 Rat: 1,355 mg/l

1,1'-oxydipropan-2-ol:
Acute oral toxicity : LD50 Oral Rat: 14,850 mg/kg

Acute dermal toxicity : LD50 Dermal Rabbit: > 20 mg/kg

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

propan-2-ol:
1,1-difluoroethane:
butane:
1,1'-oxydipropan-2-ol:

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water : Remarks: No data available

Components:

butane :

Partition coefficient: n-octanol/water : Pow: 2.89

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.
Do not contaminate ponds, waterways or ditches with chemical or used container.
The product should not be allowed to enter drains, water courses or the soil.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):

UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

The product as delivered to the customer conforms to packaging requirements for shipment by road under US Department of Transportation (DOT) regulations. Additional transportation classifications noted above are for reference only, and not a certification or warranty of the suitability of the packaging for shipment under these alternative transport regulations.

SECTION 15. REGULATORY INFORMATION

This product is regulated under the United States Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Pesticide Labeling Information Required Under U.S. FIFRA Regulations
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
WARNING
Causes skin and eye irritation.
Harmful if swallowed.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
cyclohexane	110-82-7	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Sudden Release of Pressure Hazard
Acute Health Hazard
Fire Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other

reproductive harm.

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	This product contains one or several components that are not on the Canadian DSL nor NDSL.

For information on the country notification status for other regions please contact the manufacturer's regulatory group.

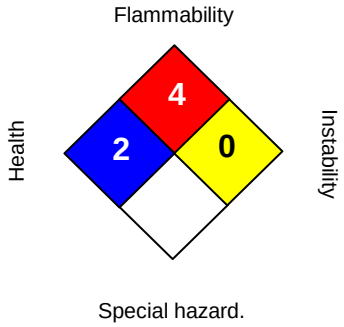
Inventory Acronym and Validity Area Legend:

TSCA (USA), DSL (Canada), NDSL (Canada)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



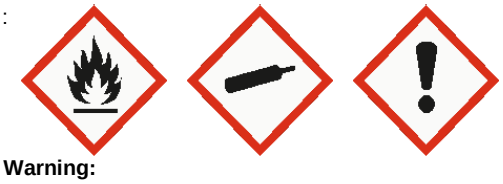
HMIS III:

HEALTH	2
FLAMMABILITY	4
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA - GHS Label Information:

Hazard pictograms :



Signal word : **Warning:**

Hazard statements : Flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statements :

Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/ face protection.
Response: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.
Storage: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place.
Disposal: Dispose of contents/container in accordance with local regulation.

Version:	2.2
Revision Date:	09/17/2016
Print Date:	06/12/2019

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®,Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®,Rexodan®, Mykal™, and a number of private labeled brands.

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 02.05.2014 Revision: 02.05.2014

1 Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)**

· **Article number:** EHS 9464

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Sealant

· **1.3 Details of the supplier of the Safety Data Sheet**

· **Manufacturer/Supplier:**
Convenience Products, division of Clayton Corp.
866 Horan Drive
Fenton, MO 63026-2416
Phone: 636-349-5855

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.
May displace oxygen and cause rapid suffocation. (USA GHS Only)

gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.

health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2 H351 Suspected of causing cancer.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 02.05.2014 Revision: 02.05.2014

Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)

(Contd. of page 1)

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xn; Harmful

R20-40: Harmful by inhalation. Limited evidence of a carcinogenic effect.

Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H229, H412.
The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS04 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
diphenylmethanediisocyanate,isomeres and homologues
tris[2-chloro-1-(chloromethyl)ethyl] phosphate
4,4'-methylenediphenyl diisocyanate
trans-dichloroethylene

· **Hazard statements**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.
May displace oxygen and cause rapid suffocation. (USA GHS Only)
H280 Contains gas under pressure; may explode if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 02.05.2014 Revision: 02.05.2014

Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)

(Contd. of page 2)

H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**
P285 In case of inadequate ventilation wear respiratory protection.
P281 Use personal protective equipment as required.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist/vapours/spray.
P314 Get medical advice/attention if you feel unwell.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

· **Additional information:**
Contains isocyanates. May produce an allergic reaction.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
3,3 % by mass of the contents are flammable

· **Hazard description:**

· **WHMIS-symbols:**
A - Compressed gas
D2A - Very toxic material causing other toxic effects

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 1
Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**	
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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Safety Data Sheet
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Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)

(Contd. of page 3)

3 Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 9016-87-9	diphenylmethanediisocyanate,isomeres and homologues Xn R20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3 Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	20-40%
CAS: 811-97-2 EINECS: 212-377-0	Norflurane Press. Gas, H280	10-20%
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9	4,4'-methylenediphenyl diisocyanate Xn R20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3 Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-20%
CAS: 13674-84-5	tris(2-chlorisopropyl)-phosphate R52/53 Aquatic Chronic 3, H412	10-20%
CAS: 13674-87-8 EINECS: 237-159-2 Index number: 015-199-00-X	tris[2-chloro-1-(chloromethyl)ethyl] phosphate Xn R40; N R51/53 Carc. 2, H351 Aquatic Chronic 2, H411	5-10%
CAS: 156-60-5 EINECS: 205-860-2 Index number: 602-026-00-3	trans-dichloroethylene Xn R20; F R11 R52/53 Flam. Liq. 2, H225 Acute Tox. 4, H332 Aquatic Chronic 3, H412	1-5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.

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Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

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Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)

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In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Do not pull solidified product off the skin.
If skin irritation continues, consult a doctor.

· **After eye contact:**
Immediately remove contact lenses if possible.
Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**
Asthma attacks
Headache
Breathing difficulty
Allergic reactions
Coughing
Nausea
Gastric or intestinal disorders when ingested.
Irritant to skin and mucous membranes.
Irritant to eyes.
Dizziness
Disorientation

· **Hazards**
Danger of impaired breathing.
Danger of disturbed cardiac rhythm.
Danger of pneumonia.
Danger of pulmonary oedema.
Danger of convulsion.

· **4.3 Indication of any immediate medical attention and special treatment needed**
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.
Monitor circulation.
If necessary oxygen respiration treatment.
Medical supervision for at least 48 hours.
Contains isocyanates. May produce an allergic reaction.

5 Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Water in flooding quantities.

· **For safety reasons unsuitable extinguishing agents:** None.

· **5.2 Special hazards arising from the substance or mixture**
Danger of receptacles bursting because of high vapour pressure when heated.
During heating or in case of fire poisonous gases are produced.

(Contd. on page 6)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 02.05.2014 Revision: 02.05.2014

Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)

(Contd. of page 5)

· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Protect from heat.
Isolate area and prevent access.
Keep people at a distance and stay on the windward side.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Use only in well ventilated areas.
· **Information about fire - and explosion protection:**
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
Provide ventilation for receptacles.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.

(Contd. on page 7)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 02.05.2014 Revision: 02.05.2014

Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)

(Contd. of page 6)

· **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
811-97-2 Norflurane	
WEEL (USA)	Long-term value: 1000 ppm
101-68-8 4,4'-methylenediphenyl diisocyanate	
PEL (USA)	Ceiling limit: 0,2 mg/m³, 0,02 ppm
REL (USA)	Long-term value: 0,05 mg/m³, 0,005 ppm Ceiling limit: 0,2* mg/m³, 0,02* ppm *10-min
TLV (USA)	Long-term value: 0,051 mg/m³, 0,005 ppm
EL (Canada)	Short-term value: C 0,01 ppm Long-term value: 0,005 ppm Skin; S
EV (Canada)	Long-term value: 0,005 ppm
156-60-5 trans-dichloroethylene	
PEL (USA)	Long-term value: 790 mg/m³, 200 ppm
REL (USA)	Long-term value: 790 mg/m³, 200 ppm
TLV (USA)	Long-term value: 793 mg/m³, 200 ppm
EL (Canada)	Long-term value: 200 ppm
EV (Canada)	Short-term value: 990 mg/m³, 250 ppm Long-term value: 790 mg/m³, 200 ppm

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Clean skin thoroughly immediately after handling the product.

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Trade name: Touch N Seal Quick Cure Polyurethane Foam Sealant HY (High Yield)

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· **Respiratory protection:**

Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**
No further relevant information available.

· **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Aerosolized liquid with compressed gas in cylinders
Colour:	Amber coloured
· **Odour:**	Light Petroleum-like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not Determined.

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Boiling point/Boiling range:	-15 °F / -26 °C
· **Flash point:**	Not applicable, as aerosol.
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure:**	Not determined.
· **Density at 20 °C:**	1,02 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
VOC (US EPA Method 24)	0 g/l
· **9.2 Other information**	No further relevant information available.

10 Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Develops readily flammable gases/fumes.
Reacts with oxidizing agents.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Contact with acids releases toxic gases.
Danger of receptacles bursting because of high vapour pressure when heated.
· **10.4 Conditions to avoid**
Keep ignition sources away - Do not smoke.

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Store away from oxidizing agents.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen cyanide (prussic acid)
Phosphorus oxides (e.g. P2O5)
Chlorine

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2200 mg/kg (mouse)
13674-87-8 tris[2-chloro-1-(chloromethyl)ethyl] phosphate		
Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
· **Subacute to chronic toxicity:**
Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
Danger through skin adsorption.
Toxic and/or corrosive effects may be delayed up to 24 hours.
Suspected of causing cancer.
In addition to local irritant manifestations, there is a narcotic effect when inhaling high concentrations, with the danger of central respiratory arrest.
Asphyxiant gas.
· **Acute effects (acute toxicity, irritation and corrosivity):** Vapours have narcotic effect.
· **Repeated dose toxicity:**
May cause damage to organs through prolonged or repeated exposure.
Repeated exposures may result in skin and/or respiratory sensitivity.

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· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Carc. 2

12 Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:**
The product contains materials that are harmful to the environment.

13674-87-8 tris[2-chloro-1-(chloromethyl)ethyl] phosphate	
LC50	1,1 mg/l (Oncorhynchus mykiss) 96 h

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Harmful to fish
· **Additional ecological information:**
· **General notes:**
Avoid transfer into the environment.
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **14.1 UN-Number**
· **DOT, ADR, IMDG, IATA** UN3500

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· **14.2 UN proper shipping name**

· **DOT**	Chemical under pressure, n.o.s. (Norflurane)
· **ADR**	3500 CHEMICAL UNDER PRESSURE, N.O.S. (Norflurane)
· **IMDG, IATA**	CHEMICAL UNDER PRESSURE, N.O.S. (Norflurane)

· **14.3 Transport hazard class(es)**

· **DOT**

· **Class**	2.2
· **Label**	2.2

· **ADR**

· **Class**	2 8A Gases.
· **Label**	2.2

· **IMDG, IATA**

· **Class**	2.2
· **Label**	2.2
· **14.4 Packing group**	
· **DOT, ADR, IMDG, IATA**	Not Regulated
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Warning: Gases.
· **Danger code (Kemler):**	20
· **EMS Number:**	F-C,S-V
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

· **Transport/Additional information:**

· **ADR**	
· **Limited quantities (LQ)**	0
· **Transport category**	3
· **Tunnel restriction code**	C/E
· **UN "Model Regulation":**	UN3500, CHEMICAL UNDER PRESSURE, N.O.S. (Norflurane), 2.2

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15 Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

13674-87-8	tris[2-chloro-1-(chloromethyl)ethyl] phosphate

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	CBD
101-68-8	4,4'-methylenediphenyl diisocyanate	D, CBD
156-60-5	trans-dichloroethylene	II

· **IARC (International Agency for Research on Cancer)**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	3
101-68-8	4,4'-methylenediphenyl diisocyanate	3

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

101-68-8	4,4'-methylenediphenyl diisocyanate

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· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

R11 Highly flammable.
R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R40 Limited evidence of a carcinogenic effect.
R42/43 May cause sensitisation by inhalation and skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Press. Gas: Gases under pressure: Compressed gas
Press. Gas: Gases under pressure: Dissolved gas
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

· **Sources**

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

COOPER Power Systems

Material Safety Data Sheet

Tranelec® Conventional Transformer Oil

Cooper Power Systems
1900 East North Street
Waukesha, Wisconsin 53188-3899 USA

Emergency Telephone: (262) 547-1251
Product Information: www.cooperpower.com

Hazardous Ingredients/Identity Information

Exposure Limits:		OSHA PEL	ACGIH* TLV	STEL
TWA (mg/m^3) exposure limit for total product as oil mist (aerosol)		5	5	10

Ingredients:	CAS #	Component	Concentration
	64742-46-7	petroleum middle distillates, severely hydrotreated	50-100%
	64742-53-6	petroleum light naphthenic distillates, hydrotreated	0-50%
	128-37-0	butylated hydroxy toluene (also know as 2,6-ditertiary-butyl para-cresol, or DBPC)	<0.3%

Hazardous Materials Identification System (HMIS):	Health	Flammability**	Reactivity**
	1	1	1

Components of this product are listed on the U.S. Toxic Substances Control Act Chemical Substances Inventory.

* ACGI states that the air is to be sampled by a method that does not collect vapor.
** Interchangeable with NFPA 704 ratings.

Physical/Chemical Characteristics

Boiling Point: >160 °C
Specific Gravity (H_2O = 1): 0.88
Vapor Pressure (mm Hg): <0.1 @ 20 °C
Pour Point: -40 °C
Vapor Density (air = 1): >5
Evaporation Rate (butyl acetate = 1): not available
Solubility in water: negligible; <0.1%
pH: essentially neutral
Appearance and odor: Clear liquid having slight petroleum odor.
Volatile Organic Compounds (g/L): nil

Fire and Explosion Hazard Data

Flash Point (ASTM D-92): 145 °C (typical)
Flammability Limits: not available
Extinguishing Media: CO_2, dry chemical, foam, and water spray (fog)
Special Fire Fighting Procedures: Use MSHA/NIOSH approved self-contained breathing apparatus with full face mask and full protective equipment in confined areas. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from sources of ignition. Application of water to flaming oil can cause spreading.
Unusual Fire and Explosion Hazards: Slight when exposed to flame; can react with oxidizing materials.

Reactivity Data

Stability: Tranelec transformer oil is stable under normal conditions of use.
Incompatibility (materials to avoid): Avoid contact with strong oxidizing agents.
Hazardous Decomposition or By-Products: Thermal decomposition products are highly dependent on the combustion conditions. A complex mixture of airborne solid, liquid, particulates, and gases will evolve when this material undergoes pyrolysis or combustion. Carbon monoxide and other unidentified organic compounds may be formed upon combustion.
Hazardous Polymerization: will not occur

Health Hazard Data

Routes of Entry: Skin contact; eye contact or inhalation possible under mist conditions.

Skin: Essentially non-toxic. Rabbit acute dermal LD_{50} >2000 mg/kg. Repeated or prolonged contact may result in localized irritation of the skin. May cause allergic reactions in some individuals.

Ingestion: Essentially non-toxic. Rat acute oral LD_{50} >5000 mg/kg. May cause gastrointestinal distress. Symptoms may include irritation, nausea, vomiting and diarrhea.

Inhalation: May cause respiratory tract irritation. Exposure to dense oil mist may lead to respiratory problems.

Carcinogenicity: none **NTP:** no **IARC Monographs:** no **OSHA Regulated:** no

Signs and Symptoms of Exposure: Prolonged or repeated skin contact may cause irritation.

Medical Conditions Generally Aggravated by Exposure: none recognized

Emergency and First Aid Procedures: If ingested, DO NOT induce vomiting. If spontaneous vomiting occurs, monitor the subject for breathing difficulty. Get immediate medical attention. If inhaled, remove affected person from exposure to mists. For eye contact, flush the eyes immediately with large amounts of water with the eyelids held away from the eye to ensure thorough rinsing. For skin contact, remove by washing with soap and water. Get medical attention if irritation persists.

Control Measures

Respiratory Protection: Use MSHA/NIOSH approved supplied-air respiratory protection if occupational exposure limits are exceeded.

Ventilation: Use local exhaust to capture vapor, mists, or fumes if necessary.

Protective Gloves: Use chemical-resistant (nitrile) gloves to prevent prolonged or repeated skin contact.

Eye Protection: Wear splash goggles or safety shield to prevent eye contact. Eye baths should be readily available in the area of handling Tranelec oil.

Other Protective Clothing or Equipment: Wear chemical-resistant (nitrile) apron or other impervious clothing to avoid prolonged or repeated skin contact.

Work/Hygenic Practices: Wash with soap and water after contact. Avoid exposure to mists.

Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Stop flow or eliminate source of leakage. Eliminate all sources of ignition. Absorb with an oil absorbent material. No special hazards except under mist or spray conditions.

A spill or release to navigable waters must be reported immediately to the National Response Center (800-424-8802). Spills may be reportable to state or local agencies.

Waste Disposal: For recycling, consult with local used oil recyclers. Tranelec oil when recycled, discarded or disposed of is a used oil per 40 CFR 279. Tranelec oil is not a hazardous waste per 40 CFR 261. Tranelec oil from retrofilled electrical equipment, by virtue of contamination from residues of earlier fluid(s), may qualify as a hazardous waste per 40 CFR 261.

Precautions to be Taken in Handling and Storage: Avoid extremes of temperature in storage. Store Tranelec oil in labeled, tightly closed containers in cool, dry, isolated and well ventilated areas, away from sources of ignition or heat. To maintain fluid for intended use as an electrical insulating fluid, eliminate exposure to oxygen and moisture.

This Material Safety Data Sheet has been prepared in order to help the users of Tranelec conventional transformer oil. The data contained herein is accurate as of the date of preparation of this sheet.

Effective Date: January 13, 2005

John Luksich
Senior Engineer – Dielectric Fluids

MATERIAL SAFETY DATA SHEET

CALUMET
SPECIALTY PRODUCTS PARTNERS, L.P.

1. Product and Company Identification

Material name	**Caltran N60-30**
Version #	01
Revision date	09-28-2011
CAS #	Mixture
Manufacturer information	Calumet Specialty Products Partners, L.P. 2780 Waterfront Pkwy E. Dr. Suite 200 Indianapolis, IN 46214 United States www.calumetlubricants.com Technical Services 317-328-5660 CHEMTREC International 703-527-3887

2. Hazards Identification

Emergency overview	WARNING Toxic by inhalation.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation.
Eyes	Avoid contact with eyes.
Skin	Avoid contact with the skin.
Inhalation	Toxic by inhalation. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	Do not ingest.

3. Composition / Information on Ingredients

Components	CAS #	Percent
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC	64742-53-6	90 - 100
Other components below reportable levels		1 - 2.5

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. For minor skin contact, avoid spreading material on unaffected skin. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Notes to physician	Symptoms may be delayed.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties	Not flammable by OSHA criteria. Not combustible by OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Water fog.

Unsuitable extinguishing media	Water. Do not use water jet as an extinguisher, as this will spread the fire.
Protection of firefighters	
Protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.
Methods for containment	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Following product recovery, flush area with water. Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wear personal protective equipment. Do not use in areas without adequate ventilation. Wash thoroughly after handling.
Storage	Store locked up. Keep away from heat, sparks and open flame. Store in a well-ventilated place. Keep container tightly closed. Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Engineering controls	Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Eye / face protection	Chemical goggles are recommended. Face-shield. Eye wash fountain is recommended.
Skin protection	Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA).
General hygiene considerations	Do not get in eyes. Do not get this material in contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Product is water-white to pale straw liquid.
Physical state	Liquid.
Form	Liquid.
Color	Colorless to light yellow
Odor	Hydrocarbon
Odor threshold	Not available.
pH	Not applicable
Vapor pressure	0.017 torr @ 68°F, ASTM D2879
Vapor density	Not available.
Boiling point	Not available.
Melting point/Freezing point	Not available.
Solubility (water)	Negligible
Specific gravity	0.8749
Relative density	Not available.
Flash point	> 293 °F (> 145 °C)

Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	> 550 °F (> 287.8 °C)
VOC	33.4 % EPA Method 24
Pour point	< -40 °F (< -40 °C)
Other data	
Kinematic viscosity	< 12 mm²/s ; Kinematic viscosity temperature @ 104 °F (40 °C)
Kinematic viscosity temp	104 °F (40 °C)

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Incompatible materials	Not available.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological Information

Toxicological data

Components	Test Results
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC□ (64742-53-6)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Inhalation LC50 Rat: 2.18 mg/l 4 Hours Acute Oral LD50 Rat: > 5000 mg/kg

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. Ecological Information

Ecotoxicological data

Components	Test Results
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC□ (64742-53-6)	EC50 Water flea (Daphnia magna): > 1000 mg/l 48 hours

* Estimates for product may be based on additional component data not shown.

Ecotoxicity	This product has no known eco-toxicological effects.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT NON-BULK

Not regulated as dangerous goods.

DOT BULK

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2)

Not regulated

DEA Essential Chemical Code Number

Not regulated

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated

DEA Exempt Chemical Mixtures Code Number

Not regulated

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance

No

Section 311 hazardous chemical

No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

Further information

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.

Issue date

09-28-2011

This data sheet contains changes from the previous version in section(s):	This document has undergone significant changes and should be reviewed in its entirety.

CALUMET
SPECIALTY PRODUCTS PARTNERS, L.P.

2780 Waterfront Pkwy. E. Dr. Suite 200 Indianapolis, IN 46214
Phone: 317-328-5660 Fax: 317-328-5668 Sales: 1-800-437-3188 www.calumetspecialty.com

Product Data Sheet

If you have questions regarding this product, please contact your Sales Representative
Customer Service and Technical Service can be reached at 1-800-437-3188.

Product: **Caltran N60-30** Product Code: **3021-00-J**
Revised: **01/06/2012**
HazMat Name: **Non-Regulated**
STCC: **29-114-15**

Test	Method	MIN	MAX	Typical
Viscosity, CST @ 0C	D445		76.00	56.52
Viscosity, CST @ 40C	D445		12.00	8.66
Viscosity, CST @ 100C	D445		3.00	2.26
Viscosity, SUS @ 100F	D2161			56.5
Gravity, API, 60F	D4052			30.0
Density @ 15C, KG/DM3	D4052		0.9100	0.8756
Flash Point, COC, C	D92	145		147
Flash Point, COC, F	D92	293		297
Pour Point, C	D97		-40	-51
Pour Point, F	D97		-40	-60
Color, ASTM	D1500		0.5	L0.5
Aniline Point, C	D611	63.0		78.4
Aniline Point, F	D611	145.3		173.0
Neut. No., MG KOH/G	D974		0.03	0.013
Water Content, ppm	D1533		35	12
Dielectric Breakdown @ 60 HZ				
Disk Electrodes, KV	D877	30		41
KV 1.02 MM Gap	D1816	20		30
KV 2.03 MM Gap	D1816	35		60
Dielec. Brkdwn, Impulse Conds.	D3300			
25C, Needle Neg. to Sphere				
Grounded, 25.4 MM Gap, KV		145		300
Corrosive Sulfur	D1275 (Method B)	n/corros.		n/corros.
Interfacial Tension, Dynes/CM	D971	40		46.5
Oxidation Stability	D2440			
72 hr Sludge, Mass %			0.1	0.01
72 hr Acid No., MG KOH/G			0.3	0.01
164 hr Sludge, Mass %			0.2	0.01
164 hr Acid No., MG KOH/G			0.4	0.02
Oxidation Stability, RBOT, MIN	D2112	195		267
Oxid.Inhib. Content, Mass%	D2668		0.30	0.27
Gassing Tendency	D2300			
Micro L/MIN (Procedure B)			+30	-12
Power Factor, 25C, %	D924		0.05	0.003
Power Factor, 100C, %	D924		0.30	0.07
Visual Examination	D1524	B & C		B & C
PCB Content, PPM	D4059		1	<1

HP Officejet J4500 All-in-One series

Fax Log for
Pam Abraham
352-567-1005
Jun 20 2012 12:48PM

NOTE: Blocked calls are not displayed on this report.
For more information, see Junk Fax Report and the Caller ID Report.

Last Transaction

Date	Time	Type	Station ID Caller ID	Duration	Pages	Result
Jun 20	12:47PM	Received	8669239860	0:35	0	Error 410*

* A communication error occurred during the fax transmission. If you're sending, try again and/or call to make sure the recipient's fax machine is ready to receive faxes. If you're receiving, contact the initiator and ask them to send the document again.

Note:

Image on Fax Send Report is set to Off

An image of page 1 will appear here for faxes that are sent as Scan and Fax.

FOX VALLEY SYSTEMS INC -- TRIG-A-CAP MARKING PAINT RED -- 8010-00F053019

========== Product Identification ==========

Product ID:TRIG-A-CAP MARKING PAINT RED
MSDS Date:07/07/1993
FSC:8010
NIIN:00F053019
MSDS Number: CDQXR
=== Responsible Party ===
Company Name:FOX VALLEY SYSTEMS INC
Address:640 INDUSTRIAL DR
City:CARY
State:IL
ZIP:60013-1944
Country:US
Info Phone Num:312-639-5744
Emergency Phone Num:312-639-5744
CAGE:1BF99
=== Contractor Identification ===
Company Name:FOX VALLEY SYSTEMS INC
Address:640 INDUSTRIAL DR
Box:City:CARY
State:IL
ZIP:60013
Country:US
Phone:847-639-5744
CAGE:1BF99

========== Composition/Information on Ingredients ==========

Ingred Name:2-BUTOXYETHANOL (ETHYLENE GLYCOL MONOBUTYL ETHER), BUTYL
CELLOSOLVE, BUTYL GLYCOL, GLYCOL ETHER EB *96-4*
CAS:111-76-2
RTECS #:KJ8575000
Fraction by Wt: 1-5%
Other REC Limits:25 PPM (SKIN)
OSHA PEL:50 PPM (SKIN)
ACGIH TLV:25 PPM (SKIN)

Ingred Name:PROPANE (DIMETHYLMETHANE) *96-4*
CAS:74-98-6
RTECS #:TX2275000
Fraction by Wt: 10-20%
Other REC Limits:1800 MG/CUM
OSHA PEL:1000 PPM
ACGIH TLV:SIMPLE ASPHYXIANT

Ingred Name:PROPYLENEGLYCOL MONOMETHYL ETHER ACETATE,
1-METHOXY-2-PROPANOL ACETATE
CAS:108-65-6
RTECS #:AI8925000
Fraction by Wt: 1-5%

Ingred Name:TOLUENE (IARC CARC- GROUP 3) *96-4*
CAS:108-88-3
RTECS #:XS5250000
Fraction by Wt: 10-20%
Other REC Limits:375 MG/CUM

OSHA PEL:100 PPM
ACGIH TLV:100 PPM
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:LIGHT ALIPHATIC NAPHTHA, VM & P NAPHTHA, LACOLENE *96-4*
CAS:64742-89-8
Fraction by Wt: 5-12%
OSHA PEL:300 PPM
ACGIH TLV:300 PPM

Ingred Name:XYLENE, DIMETHYLBENZENE, XYLOL (IARC - GROUP 3) *96-4*
CAS:1330-20-7
RTECS #:ZE2100000
Fraction by Wt: 1-5%
Other REC Limits:100 PPM
OSHA PEL:100 PPM
ACGIH TLV:100 PPM, SKIN
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:ISOBUTANE, 2-METHYLPROPANE
CAS:75-28-5
RTECS #:TZ4300000
Fraction by Wt: 15-20%
Other REC Limits:1000 PPM
OSHA PEL:1800 MG/CUM
ACGIH TLV:1000 PPM

Ingred Name:ETHYL BENZENE *96-4*
CAS:100-41-4
RTECS #:DA0700000
Fraction by Wt: 1-2%
Other REC Limits:100 PPM
OSHA PEL:435 MG/CUM
ACGIH TLV:434 MG/CUM
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:BARIUM SULFATE, BARYTES *96-4*
CAS:7727-43-7
RTECS #:CR0600000
Fraction by Wt: 1-2%
OSHA PEL:10 MG/CUM
ACGIH TLV:10 MG/CUM

Ingred Name:MOLYBDATE ORANGE; LEAD CHROMATE MOLYBDATE SULFATE RED
(HUMAN CARCINOGEN BY IARC - GROUP 1) *96-4*
CAS:12656-85-8
RTECS #:QA4660000
Fraction by Wt: 3-8%
Other REC Limits:STEL 10 MG/CUM
OSHA PEL:5 MG/CUM
ACGIH TLV:5 MG/CUM

========== Hazards Identification ==========

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Health Hazards Acute and Chronic:EYES: IRRITATION & CONJUNCTIVITIS.

SKIN: MODERATE IRRITATION, DERMATITIS & ABSORPTION. INHALATION: MUCOUS MEMBRANE IRRITATION OF THE NOSE & THROAT, RESPIRATORY IRRITATION & ALLERGIC REACTION. PRODUCT CONTAINS LEAD CHROMATES & LEAD MOLYBDATE. DRIED FILM OF THIS PAINT MAY BE HARMFUL/FATAL IF EATEN/CHEWED. (SEE SUPP)
Explanation of Carcinogenicity:SEE INGREDIENTS.
Effects of Overexposure:IRRITATION, REDNESS, TEARING, BLURRED VISION, DEFATTING, HEADACHES, NAUSEA, DROWSINESS.

========== First Aid Measures ==========

First Aid:EYES: FLUSH W/WATER FOR 15 MINS. SKIN: WASH AREA THOROUGHLY W/SOAP & WATER. APPLY A MOISTURIZING HAND CREAM. INHALATION: REMOVE TO FRESH AIR. GIVE OXYGEN/CPR, PREFERABLY MOUTH TO MOUTH IF NEEDED. KEEP WARM & QUIET. INGESTION: ONLY INDUCE VOMITING AT THE INSTRUCTION OF A PHYSICIAN. KEEP WARM & QUIET. OBTAIN MEDICAL ATTENTION IN ALL CASES.

========== Fire Fighting Measures ==========

Flash Point:-20F
Lower Limits:1.9
Upper Limits:8.5
Extinguishing Media:FOAM, CO2, DRY CHEMICAL.
Fire Fighting Procedures:USE FULL PROTECTIVE EQUIPMENT USING SCBA. WATER MAY BE USED TO COOL CLOSED CONTAINERS.
Unusual Fire/Explosion Hazard:EXTREMELY FLAMMABLE. SPRAY MIST/VAPORS FROM CAN PER 400 CUBIC FEET OF AIR MAY REACH LOWER EXPLOSIVE LIMIT & COULD BE IGNITED BY A FLAME/SPARK.

========== Accidental Release Measures ==========

Spill Release Procedures:REMOVE SOURCES OF IGNITION, VENTILATE AREA, WIPE UP W/INERT MATERIAL. DON'T FLUSH INTO DRAINS. REMOVE RESIDUE W/A SUITABLE SOLVENT CLEANER IMMEDIATELY.

========== Handling and Storage ==========

Handling and Storage Precautions:AVOID STORING NEAR RADIATOR, STOVE, OPEN FLAME/DIRECT SUNLIGHT. DON'T STORE AT TEMPS >120F. USE W/ADEQUATE VENTILATION.
Other Precautions:CONTENTS UNDER PRESSURE. EXPOSURE TO HIGH TEMPS MAY CAUSE BURSTING. DON'T INCINERATE/PUNCTURE CAN. DON'T SPRAY INTO FLAMES/ANY INCANDESCENT MATERIAL. DON'T SMOKE WHILE USING THIS PRODUCT/WHERE SOLVENT VAPORS ARE PRESENT.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:NOT NORMALLY NEEDED IF LOCAL EXHAUST IS SATISFACTORY. IF VENTILATION IS INADEQUATE, USE RESPIRATORY MASK APPROVED BY NIOSH/MSHA FOR PROTECTION AGAINST SPRAY/MIST.
Ventilation:REQUIREMENTS VARY W/RATE OF PRODUCT USE. SUPPLEMENT TO KEEP BELOW OSHA & ACGIH PERMISSIBLE LEVELS OF EACH INGREDIENT.
Protective Gloves:SOLVENT RESISTANT
Eye Protection:RECOMMENDED
Work Hygienic Practices:DON'T EAT, DRINK/SMOKE.
Supplemental Safety and Health
MAT CONT'D: ALLOYS, MAGNESIUM. HLTH HZRD CONT'D: CONTACT W/BROKEN SKIN/INHALATION MAY CAUSE SEVERE BODILY HARM. LEAD CHROMATE IS A CANCER HAZARD. PROLONGED/REPEATED INALATION & INGESTION, SUCH AS

FROM POOR HYGIENE, HOUSEKEEPING/HANDLING PRACTICES, CAN RESULT IN LEAD POISING.

========== Physical/Chemical Properties ==========

Vapor Density:>1
Evaporation Rate & Reference:SLOWER THAN ETHER
Appearance and Odor:AEROSOL DISPENSING A PAINT. COLOR DEPENDENT UPON GRADE W/CHARACTERISTIC ODOR
Percent Volatiles by Volume:70

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS, ALKALI, ALKALINE EARTH METALS, SODIUM, POTASSIUM, BARIUM, FINE POWDERS OF LIGHT METALS. (SUPP)
Stability Condition to Avoid:HEAT, SPARKS, TEMPS >120F, OPEN FLAME, DIRECT SUNLIGHT.
Hazardous Decomposition Products:THERMAL: CO, CO2.

========== Disposal Considerations ==========

Waste Disposal Methods:DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS. DON'T PIERCE/BURN CAN EVEN AFTER USE.

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

Triple-D® Universal Coil Cleaner

SECTION 1. IDENTIFICATION

PRODUCT IDENTIFIER:
TRIPLE-D-GRAN
OTHER MEANS OF IDENTIFICATION:
TRIPLE-D-GRAN
RECOMMENDED USE OF THE CHEMICAL:
Please see label for instruction
RESTRICTIONS ON USE:
None known

MANUFACTURED BY: DiversiTech Corporation
3039 Premiere Parkway
Suite 600
Duluth, GA 30097
INFORMATION PHONE #: 1 800.995.2222
EMERGENCY PHONE #: 1 800.255.3924 Chem-Tel (Chemical Emergencies)

SECTION 2. HAZARD IDENTIFICATION

CLASSIFICATION OF THE CHEMICAL:
Eye Damage, category 1
Skin Irritation, category 2

HAZARD SYMBOL(S):

SIGNAL WORD: Danger

HAZARD STATEMENT(S)

H315	Causes skin irritation
H318	Causes serious eye damage.

PRECAUTIONARY STATEMENT(S)

P102	Keep out of reach of children.
P264	Wash hands thoroughly after handling.
P280	Wear eye protection and protective gloves.
P321	Specific treatment (see FIRST AID section on this label).

RESPONSE

P302+352	IF ON SKIN: Wash with plenty of water.
P332+313	If skin irritation occurs: Get medical advice.
P362+364	Take off contaminated clothing and wash it before reuse.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison control center.

HAZARD(S) NOT OTHERWISE CLASSIFIED:
None known

0% of the chemical consists of ingredient(s) of unknown acute toxicity.

NOTE:
Labeling elements found on this SDS may be different from labeling elements found on the label. Safety Data Sheets are regulated by OSHA (29 CFR §1910.1200) while the actual product and its label may be regulated by a different government agency. Please contact the responsible party in Section 1 if you have any questions.

Triple-D® Universal Coil Cleaner

SECTION 3. INFORMATION ON INGREDIENTS

INGREDIENT	CAS No.	COMPOSITION, wt%	GHS CLASSIFICATION(S)
Sodium Metasilicate	6834-92-0	20-40%	Eye Dam. 1; Skin Irrit. 2
Potassium Carbonate	584-08-7	20-40%	Eye Irrit. 2; Skin Irrit. 2

TRADE SECRET CLAIM:
When applicable, the specific concentration of each hazardous ingredient is considered a TRADE SECRET. Chemical names and identifiers will be listed in exact composition weight and name when not subject to trade secret exemptions.

NOTE:
This product may contain other ingredients that are not required to be disclosed on this safety data sheet or product label in accordance with 19 CFR §1910.1200. Any ingredient not listed on either the SDS or label is not considered hazardous to health and shouldn't pose a risk to the user.

SECTION 4. FIRST AID MEASURES

GENERAL FIRST AID MEASURES:
If medical attention is required due to exposure then be sure to take product label or safety data sheet when seeking medical care.

MOST IMPORTANT SYMPTOMS:
None known.

IF INHALED:
Move person to fresh air and keep at a comfortable position for breathing. Administer artificial respiration if person is not breathing.

IF ON SKIN:
Wash with soap and water. Take off contaminated clothing and wash it before reuse.

IF IN EYES:
Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED:
Do NOT induce vomiting unless instructed to do so by a trained medical professional. Rinse mouth with water.

INDICATION OF IMMEDIATE MEDICAL ATTENTION:
Seek immediate medical attention if chemical is exposed to eyes.

SECTION 5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:
Water spray, carbon dioxide, sand, powder extinguisher, dry chemical.

UNSUITABLE EXTINGUISHING MEDIA:
None known.

SPECIFIC HAZARDS:
None known.

HAZARDOUS COMBUSTION PRODUCTS:
Carbon monoxide, carbon dioxide, and nitrogen oxides.

SPECIAL PROTECTIVE EQUIPMENT:
Not determined.

PRECAUTIONS FOR FIRE-FIGHTERS:
Not determined.

Triple-D® Universal Coil Cleaner

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Remove non-emergency personnel from the area in an orderly fashion.

PROTECTIVE EQUIPMENT:
Use appropriate chemical-resistant gloves and eye protection.

EMERGENCY PROCEDURE(S):
Cover drains to prevent spill from entering waterways. Evacuate non-emergency personnel from the area. Shut off all sources of ignition.

METHODS FOR CONTAINMENT:
Cover drains and ventilate area to prevent vapor build-up.

REFERENCES:
See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

METHODS FOR CLEAN UP:
For small spills, wipe with an absorbent material. For large spills, dilute with water or neutralize with diluted acid.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:
Keep away from all ignition sources. Do not smoke while handling.

CONDITIONS FOR SAFE STORAGE:
Keep cool in a well-ventilated place away from sunlight. Ensure local and adequate ventilation. Keep container tightly sealed in its original container.

STORAGE INCOMPATABILITIES:
Aluminum

SECTION 8. EXPOSURE CONTROLS

INGREDIENT	CAS No.	OSHA PEL	NIOSH	ACGIH
Sodium Metasilicate	6834-92-0	2mg/m³	2mg/m³	2mg/m³
Potassium Carbonate	584-08-7	n/a	n/a	n/a

GENERAL NOTE:
Practice good industrial hygiene. Wash hands after handling and use.

APPROPRIATE ENGINEERING CONTROLS:
Ensure mechanical ventilation.

EYE/FACE PROTECTION:
Eye protection is recommended. Wear goggles or another form of chemically resistant eye protection.

SKIN PROTECTION:
Wear gloves made of rubber, neoprene, or nitrile. Appropriate aprons are recommended to prevent exposure from splash back.

RESPIRATORY PROTECTION:
No anticipated protective equipment is required.

ENVIRONMENTAL PROTECTION:
No anticipated protective equipment is required.

Triple-D® Universal Coil Cleaner

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Granular orange solid.	ODOR:	Not determined.
pH:	Not applicable.	ODOR THRESHOLD:	Not determined.
MELTING POINT:	Not determined.	BOILING POINT:	Not determined.
FLASHPOINT:	Not determined.	EVAPORATION RATE:	Not determined.
FLAMMABILITY:	Not determined.	UPPER EXPLOSIVE %:	Not determined.
VAPOR PRESSURE:	Not determined.	LOWER EXPLOSIVE %:	Not determined.
VAPOR DENSITY:	Not determined.	RELATIVE DENSITY:	1.13
SOLUBILITY:	Water miscible.	PARTITION COEFFICIENT:	Not determined.
AUTO-IGNITION:	Not determined.	DECOMPOSITION TEMP:	Not determined.
VISCOSITY:	Not determined.		

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY:
Not anticipated to be reactive.

CHEMICAL STABILITY:
Chemical is anticipated to be stable in normal storage conditions.

HAZARDOUS REACTIONS:
None known.

CONDITIONS TO AVOID:
Heat, sources of ignition, direct sunlight, etc.

INCOMPATIBLE MATERIALS:
Strong oxidizers, acids, and formaldehydes.

HAZARDOUS DECOMPOSITION PRODUCTS:
None known.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY ESTIMATES:
Oral – Contains no ingredient(s) considered toxic.
Dermal – Contains no ingredient(s) considered toxic.
Inhalation – Contains no ingredient(s) considered toxic.

SKIN CORROSION/IRRITATION:
Contains an ingredient known to cause skin irritation.

EYE DAMAGE/IRRITATION:
Contains ingredients known to cause permanent eye damage.

SENSITIZATION:
Respiratory: Contains no ingredient(s) applicable to this category.
Skin: Contains no ingredient(s) applicable to this category.

GERM CELL MUTAGENICITY:
Contains no ingredient(s) applicable to this category.

CARCINOGENICITY:
Contains no ingredient(s) applicable to this category.

REPRODUCTIVE TOXICITY:
Contains no ingredient(s) applicable to this category.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:
Contains an ingredient which may cause respiratory irritation.

ASPIRATION HAZARD:
Contains no ingredient(s) applicable to this category.

SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:
Contains no ingredient(s) applicable to this category.

Triple-D® Universal Coil Cleaner

SYMPTOMS RELATED TO CHARACTERISTICS:
Not determined.

DELAYED AND IMMEDIATE EFFECT FROM SHORT- AND LONG-TERM EXPOSURE::
Not determined.

NATIONAL TOXICOLOGY PROGRAM LISTING:
No ingredients listed.

INTERNATIONAL AGENCY FOR REACH ON CANCER LISTING:
No ingredients listed.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY:
Algae – Contains no ingredient(s) considered toxic.
Fish – Contains no ingredient(s) considered toxic.
Crustacea – Contains no ingredient(s) considered toxic.

PERSISTENCE AND DEGRADEABILITY:
Not determined.

BIOACCUMULATIVE POTENTIAL:
Not determined.

MOBILITY IN SOIL:
Not determined.

OTHER ADVERSE EFFECTS:
None known.

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL OF EMPTY CONTAINERS:
Please recycle container with a licensed recycling company.

DISPOSAL OF FULL OR PARTIALLY FULL CONTAINERS:
Dispose in accordance with all local regulations. Contact a licensed waste management company for questions on disposal procedures.

SECTION 14. TRANSPORT INFORMATION

HAZARD PLACARD:

UN NUMBER: UN3262
LTD QTY: <5 kg

UN PROPER SHIPPING NAME: Corrosive solid, basic, inorganic, n.o.s.
HAZARD CLASS: 8
PACKAGING GROUP: III
ENVIRONMENTAL HAZARD: No.
TRANSPORT IN BULK: Not determined.
SPECIAL PRECAUTIONS: Do not ship with excessive weight on top. Keep in original containers.

Triple-D® Universal Coil Cleaner

SECTION 15. REGULATORY INFORMATION

SARA:
311 – No applicable ingredient(s).
312 – No applicable ingredient(s).
313 – No applicable ingredient(s).

TSCA INVENTORY LIST:
Each ingredient is on the TSCA inventory list as ACTIVE.

HMIS®III: (higher numbers indicate higher risk)
Health, 2
Flammability, 0
Physical Hazard, 0

RIGHT-TO-KNOW:
Sodium metasilicate, potassium carbonate.

CALIFORNIA:
Prop 65: No ingredient(s) listed.
ARB Designation: Single purpose cleaner.
VOC Limit: Not determined

NFPA®: (higher numbers indicate higher risk)
Health, 2
Flammability, 0
Instability, 0

SECTION 16. OTHER INFORMATION

REVISION: 2
REVISION DATE: October 26, 2020

REVISION PURPOSE:
Revision based on the new data in relation to formula.

GENERAL DISCLAIMER:
All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publications of use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

Material Safety Data Sheet

Effective Date: 20-FEB-2013
Product: Trycera

I. IDENTIFICATION

Chemical Name: Triclopyr
Chemical Family: Specialty Herbicide
Formula: Not applicable, formulated mixture.
Synonyms: None
CAS Number: Not applicable, formulated mixture.
EPA Number: 5905-580

II. PHYSICAL DATA

Boiling Point: >212 Degrees F.
Freezing Point: <32 Degrees F.
Spec Gravity: 1.150 gms/cc
Vapor Pressure: Not determined
Vapor Density: Not determined
Solubility: Emulsifiable
Volatiles: Not determined
Evaporation: Not determined
Melting Point: Not applicable
Appearance: Yellow to amber liquid with surfactant odor.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
Triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid	55335-06-3	29.4	10 mg/m3	Skin & eye irritant.
Inert ingredients, including surfactants and solvents.		70.6		Skin & eye irritant.

IV. FIRE AND EXPLOSION HAZARD

Flash Point: >200 Degrees F.
Autoignition Temp: Not determined
Flammable Limit: Not determined
Extinguishing Media: Use foam, water fog, water spray, dry chemical or carbon dioxide extinguishing agents.
Special Fire Fight Proc: Wear self-contained breathing apparatus and full protective clothing. Contain and dispose of fire control water.
Fire and Expl Hazard: Under fire conditions, this material may emit toxic and irritating vapors.

Material Safety Data Sheet

Effective Date: 20-FEB-2013
Product: Trycera

V. HEALTH HAZARD

Carcinogen Information: Not listed by IARC, NTP or OSHA.

ACUTE EFFECTS OF OVER EXPOSURE

Swallowing:	Low toxicity if swallowed. Small amounts ingested incidental to handling are not likely to cause injury.
Skin Absorption:	Prolonged skin contact is unlikely to result in skin absorption of harmful amounts.
Inhalation:	Excessive exposure may cause irritation to the upper respiratory tract and lungs.
Skin contact:	Prolonged contact may cause skin irritation with local redness. Irritation, burning, drying or flaking of skin may occur with repeated exposure.
Eye Contact:	May cause slight temporary eye irritation. Corneal injury is unlikely.
Chronic Effects:	None currently known.
Other Hazard:	None currently known.

EMERGENCY AND FIRST AID PROCEDURES

Swallowing:	Do not induce vomiting. Seek immediate medical attention.
Skin:	Wash affected area with plenty of soap and water. If irritation persists, seek medical treatment.
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen. Seek medical attention if irritation develops.
Eyes:	Flush eyes thoroughly with water for at least 15 minutes, holding eyelids open. Consult a physician if irritation persists.
Notes to Physician:	There is no specific antidote for this product. All treatment should be based on the observed signs and symptoms of distress in the patient. The decision of whether to induce vomiting should be made by the physician. If lavage is performed, suggest endotracheal and/or esophageal control as there is a risk of aspiration. If chemical burns are present, treat as a thermal burn after decontamination.

Material Safety Data Sheet

Effective Date: 20-FEB-2013
Product: Trycera

VI. REACTIVITY

Stability:	Stable
Conditions to Avoid:	Product will burn. Keep away from heat and open flames.
Polymerization:	Will Not Occur
Conditions to Avoid:	None currently known.
Incompatibility material:	Avoid contact or storage with acids, bases and strong oxidizers.
Hazardous Combustion:	May produce carbon monoxide, nitrogen oxides, hydrogen chloride and phosgene if in a fire.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc:	Contain spill using an absorbent or impervious material, such as clay, sand or earth. Collect and place in chemical waste containers for proper disposal. Do not contaminate water supplies with spilled material.
Waste Disposal Method:	This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

VIII. SPECIAL PROTECTION INFORMATION

Respiration:	Use NIOSH-approved air purifying respirator when TLV is exceeded.
Ventilation:	General and/or local exhaust should be sufficient.
Gloves:	Impervious gloves.
Eyes:	Safety glasses or chemical goggles.
Other:	Emergency shower, eyewash station, impervious apron and footwear.

IX. SPECIAL PRECAUTIONS

Special precaution:	Keep out of reach of children. Do not store with food, feed or other material to be used or consumed by humans or animals.
Other precaution:	Avoid breathing vapors or spray mists. Always wash your hands after handling this material and before eating, drinking, chewing gum, using tobacco or using the toilet. Store in original containers with lids tightly closed.

Material Safety Data Sheet

Effective Date: 20-FEB-2013
Product: Trycera

X. SHIPPING INFORMATION

Shipping name: Not regulated by DOT.
Hazard Class: None
Identification No: None
Labels Required: None required
Placarding: None
Freight Class: Pesticides, NOI, Herbicides, Other than Poison (NMFC Item 155050, Sub 11, Class 70)

Chemical Name	Equivalent R.Q.
Not applicable	Not applicable

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:
(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum

Health: 1 Fire: 1 Reactivity: 0

S.A.R.A. Title III Hazard Classification: (Yes/No)

Immediate (Acute) Health: Y Delayed (Chronic) Health: Y
Sudden Release of pressure: N Fire: N
Reactive: N

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017
Helena Chemical Company believes that the data contained herein is factual. This data is not to be taken as a warranty or representation of legal responsibility. It is offered solely for your consideration, investigation and verification.

HELENA

SUPPLEMENTAL LABEL

This supplemental label expires on May 1, 2015 and must not be used or distributed after this date.

TRYCERA™

EPA. REG. NO. 5905-580
(Not for Use in CA and NY)

FOR USE ON PERENNIAL BLUEGRASS, PERENNIAL RYEGRASS, AND TALL FESCUE ORNAMENTAL TURF (INCLUDING SOD FARMS, COMMERCIAL TURF, AND GOLF COURSES)

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF APPLICATION. READ THE LABEL AFFIXED TO THE CONTAINER FOR TRYCERA™ BEFORE APPLYING.
USE OF TRYCERA™ ACCORDING TO THIS LABELING IS SUBJECT TO THE USE PRECAUTIONS AND LIMITATIONS IMPOSED BY THE LABEL AFFIXED TO THE CONTAINER FOR TRYCERA™.

Refer to 'Weeds/Plants Controlled" and "Annual and Perennial Weeds" for a list of broadleaf weeds controlled by TRYCERA™.

For spot treatments, do not apply more than 2.8 qts. of TRYCERA™ per acre in a single application.
Foliar sprays should be applied during warm weather, from early spring through fall, when weeds are actively growing. Broadleaf weeds germinate at different times. Only emerged weeds present at the time of application will be controlled. Newly seeded turf should be mowed 2 or 3 times before being treated. When making applications to mature plants, hard-to-control species, or during drought conditions, use higher rates. Application under drought conditions may provide less than desirable results. Use low pressure sprays to minimize spray drift. Do not water for 24 hours after application.

Mixing Instructions
When TRYCERA™ is mixed with water it forms an emulsion (not a solution) and separation may occur unless the spray mixture is agitated continuously.

Add about one-half the required amount of clean water to the spray tank. Start agitation and add the specified amount of TRYCERA. Provide moderate agitation while completing the addition of water and during application.

Reseeding Precaution: Do not reseed for 3 weeks after application. (This precaution does not apply when bermudagrass turf is overseeded with perennial ryegrass at a minimum reseeding of 400 lbs. per acre.)

Broadcast Treatment of Ornamental Turf
Apply 0.7 to 1.4 quarts per acre of TRYCERA™ in enough water to provide uniform coverage of the target area to control actively growing broadleaf weeds growing in perennial bluegrass, perennial ryegrass, or tall fescue. Do not use on other turf grass species (see RESTRICTIONS section of this label) unless injury can be tolerated. To minimize turf injury, do not treat if turf is under heat-or drought-stress and make repeat applications at least 4 weeks apart.

Tank Mixing: To improve the spectrum of activity, TRYCERA™ may be tank mixed at a rate of 0.7 to 1.4 pints per acre with specified rates of low volatile amine or ester formulations of 2,4-D, MCPP, or other labeled postemergence broadleaf herbicides. Refer to tank mix product labels for specific use directions, precautions, and limitations before use.

Spot Treatment of Ornamental Turf
Mix ½ to 1 ounce of TRYCERA™ per 1000 square feet in enough water to provide uniform coverage of the target area and apply at any time broadleaf weeds are susceptible. **Note:** Do not apply more than 2.8 quarts per acre or 2 ounces per 1000 square feet of TRYCERA™ in a single application.

Control of Kikuyugrass
Apply TRYCERA™ at a rate of 0.7 to 1.4 quarts per acre. Three to four additional applications at 4 to 6 week intervals may be required to achieve control of kikuyugrass.

Suppression of Bermudagrass
Apply TRYCERA™ at the rate of 1.4 quarts per acre. Three to four additional applications at 4 week intervals will be required to give adequate suppression of bermudagrass and allow fescue or other desired turfgrass species to dominate. To improve suppression and control of bermudagrass, 1.4 quarts per acre of TRYCERA™ may be tank mixed with a postemergence grass herbicide registered for this use pattern. Three to four additional applications of this tank mix at 4 week intervals should be made to achieve control. Reseeding following application will accelerate the transition to cool season turf (see Reseeding Precautions above).

WEEDS / PLANTS CONTROLLED			ANNUAL AND PERENNIAL BROADLEAF WEEDS
alder	dogwood	salmonberry	bindweed
arrowwood	elderberry	sassafras	burdock
ash	elm	scotch broom	Canada thistle
aspen	gallberry	sumac	chicory
Australian pine	hazel	sweetbay magnolia	curly dock
bear clover (bearmat)	hornbeam	sweetgum	dandelion
beech	kudzu	sycamore	elephant ear
birch	locust	tanoak	field bindweed
blackberry	madrone	thimbleberry	lambsquarters
blackgum	Maleleuca (seedlings)	tulip poplar	Mexican petunia
Brazilian pepper	maples	waxmyrtle	plantain
cascara	mulberry	western hemlock	purple loosestrife*
ceanothus	oaks	white titi	ragweed
cherry	persimmon	wild rose	smartweed
Chinese tallow	pine	willow	spanishneedles/common beggarticks
chinquapin	poison ivy	winged elm	tansy ragwort
choke cherry	poison oak		tropical soda apple
cottonwood	poplar		vetch
crataegus (hawthorn)	salt-brush (*Baccharis* spp.)		wedelia
Douglas fir	salt cedar		wild lettuce

RESTRICTIONS

- TRYCERA™ may injure certain turfgrass species. Do not apply to bahiagrass, bentgrass, bermudagrass, centipedegrass, St. Augustine grass, or zoysiagrass, unless turf injury can be tolerated.
- Do not apply TRYCERA™ to exposed roots of shallow rooted trees and shrubs.
- Do not apply TRYCERA™ to golf course greens.
- Do not allow grazing in treated areas.

AD 050112

Manufactured for
Helena Chemical Company
225 Schilling Boulevard, Suite 300
Collierville, TN 38017

TRYCERA®

Selective Broadleaf Herbicide

For the control of woody plants, broadleaf weeds in forests and industrial non-crop areas, including manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, fence rows, non-irrigation ditch banks, and around farm buildings; including application to grazed areas, and establishment and maintenance of wildlife openings on these sites, and in Christmas tree plantations. Use within production forests and industrial non-crop sites (including those listed above) may include applications to control target vegetation around standing water sites, such as marshes, wetlands, and the banks of ponds and lakes. Aquatic Sites: For control of immersed, submersed and floating aquatic plants in aquatic sites such as ponds, lakes, reservoirs, non-irrigation canals, seasonal irrigation waters and ditches which have little or no continuous outflow, marshes and wetlands, including broadleaf and woody vegetation on banks and shores within or adjacent to these and other aquatic sites.

ACTIVE INGREDIENT:	
Triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid	29.4%
INERT INGREDIENTS	70.6%
TOTAL	100.0%

Acid equivalent: 2.87 lbs./gal.

KEEP OUT OF REACH OF CHILDREN

DANGER – PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

SEE INSIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND FIRST AID INSTRUCTIONS

EPA Reg. No. 5905-580 AD 042914
EPA Est. No.: First letters of product batch code indicate producing establishment.
5905-AR-1=WA • 5905-GA-1=CG • 5905-IA-1=DI • 5905-CA-1=KC

Manufactured For
HELENA CHEMICAL COMPANY
225 SCHILLING BOULEVARD, SUITE 300 • COLLIERVILLE, TENNESSEE 38017

SPECIMEN

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FIRST AID	
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-824-9300 for emergency medical treatment information.	
Note to Applicator: Allergic skin reaction is not expected from exposure to spray mixtures of **TRYCERA®** herbicide when used as directed.	
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Do not get in eyes or on skin or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear
- Chemical-resistant gloves (14 mils) such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the WPS [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified In the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Under certain conditions, treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants, which may contribute to fish suffocation. This loss can cause fish suffocation. Therefore, to minimize this hazard, do not treat more than

SPECIMEN LABEL

one-third to one-half of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency for fish and game before applying to public water to determine if a permit is needed.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store the product near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all **Directions for Use** carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPL), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Protective eyewear
- Chemical-resistant gloves (14 mils) such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber

Refer to label booklet for **Directions for Use** including **Storage and Disposal**.

Notice: Read the entire label. Use only according to label directions. Before using this product, read **Warranty Disclaimer**, **Inherent Risks of Use**, and **Limitation of Remedies** at end of label booklet. If terms are unacceptable, return at once unopened.

In case of emergency endangering health or the environment involving this product, call 1-800-824-9300. If you wish to obtain additional product information, visit our web site at www.helenachemical.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: For applications to non-cropland areas, do not allow entry into areas until sprays have dried, unless applicator and other handler PPE is worn.

PREVIOUS LABEL

GENERAL INFORMATION FOR PRODUCTION FORESTS AND INDUSTRIAL NON-CROP AREAS

Use **TRYCERA®** specialty herbicide for the control of woody plants and broadleaf weeds in forests and industrial non-crop areas including manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, fence rows, non-irrigation ditch banks, and around farm buildings, including application to grazed areas, and establishment and maintenance of wildlife openings on these sites, and in Christmas tree plantations. Use within production forests and industrial non-crop sites (including those listed above) include applications to control target vegetation in and around standing water sites, including marshes, wetlands, and the banks of ponds and lakes.

Obtain Required Permits: Consult with appropriate State or local water authorities before applying this product to public waters. State or local public agencies may require permits.

General Use Precautions and Restrictions

In Arizona: The state of Arizona has not approved **TRYCERA®** for use on plants grown for commercial production, specifically forests grown for commercial timber production, or on designated grazing areas.

When applying this product in tank mix combination, follow all applicable use directions, precautions and limitations on each manufacturer's label.

Chemigation: Do not apply this product through any type of irrigation system.

Do not apply **TRYCERA®** directly to, or otherwise permit it to come into direct contact with, grapes, tobacco, vegetable crops, flowers, or other desirable broadleaf plants. Do not permit spray mists containing **TRYCERA®** to drift onto such plants.

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs) and transitional areas between upland and lowland sites.

Water treated with **TRYCERA®** may not be used for irrigation purposes for 120 days after application or until residue levels of **TRYCERA®** are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less.

Seasonal Irrigation Waters: TRYCERA® may be applied during the off-season to surface waters that are used for irrigation on a seasonable basis provided that there is a *minimum* of 120 days between applying **TRYCERA®** and the first use of treated water for irrigation purposes, or until residue levels of **TRYCERA®** are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less.

Grazing and Haying Restrictions

Except for lactating dairy animals, there are no grazing restrictions following application of this product.

- **Grazing Lactating Dairy Animals:** Do not allow lactating dairy animals to graze treated areas until the next growing season following application of this product.
- Do not harvest hay for 14 days after application.
- Grazed areas of non-cropland and forestry sites may be spot treated if they comprise no more than 10% of the total grazable area.

Slaughter Restrictions: During the season of application, withdraw livestock from grazing treated grass at least 3 days before slaughter.

Avoiding Injurious Spray Drift

Make applications only when there is little or no hazard from spray drift. Small quantities of spray, which may not be visible, may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ornamental plants that are near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions, or temperature inversions (stable air). If the smoke layers or indicates a potential of hazardous spray drift, do not spray.

AERIAL APPLICATION INSTRUCTIONS

For aerial application on rights-of-way or other areas near susceptible crops, apply through a Microfoil or Thru-Valve boom*, or use an agriculturally labeled drift control additive. Other drift reducing systems or thickened sprays prepared by using high-viscosity inverting systems may be used if they are made as drift-free as mixtures containing agriculturally labeled thickening agents or applications made with the Microfoil or Thru-Valve boom. Keep spray pressures low enough to provide coarse spray droplets. Spray boom should be no longer than 3/4 of the rotor length. Do not use a thickening agent with the Microfoil or Thru-Valve booms, or other systems that cannot accommodate thick sprays. Spray only when the wind velocity is low (follow State regulations). Avoid application during air inversions. If a spray thickening agent is used, follow all use recommendations and precautions on the product label.

*Reference within this label to a particular piece of equipment produced by or available from other parties is provided without consideration for use by the reader at its discretion and subject to the reader's independent circumstances, evaluation, and expertise. Such reference by Helena Chemical Company is not intended as an endorsement of such equipment, shall not constitute a warranty (express or implied) of such equipment, and is not intended to imply that other equipment is not available and equally suitable. Any discussion of methods of use of such equipment does not imply that the reader should use the equipment other than is advised in directions available from the equipment's manufacturer. The reader is responsible for exercising its own judgment and expertise, or consulting with sources other than Helena Chemical Company, in selecting and determining how to use its equipment.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance of the outermost operating nozzles on the boom must not exceed 3/4 the length of the rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator must be familiar with and take into account the information covered in the following Aerial Drift Reduction Advisory. [This information is advisory in nature and does not supersede mandatory label requirements.]

Aerial Drift Reduction Advisory

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind**, **Temperature and Humidity**, and **Temperature Inversions**).

Controlling Droplet Size:

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications must not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Ground Equipment: To aid in reducing spray drift, **TRYCERA®** should be used in thickened (high viscosity) spray mixtures using an agriculturally labeled drift control additive, high viscosity invert system, or equivalent as directed by the manufacturer. With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by keeping the operating spray pressures at the lower end of the manufacturer's recommended pressures for the specific nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when wind velocity is low (follow State regulations). In hand-gun applications, select the minimum spray pressure that will provide adequate plant coverage (without forming a mist). Do not apply with nozzles that produce a fine-droplet spray.

High Volume Leaf-Stem Treatment: To minimize spray drift, do not use pressure exceeding 50 psi at the spray nozzle and keep sprays no higher than brush tops. An agriculturally labeled thickening agent may be used to reduce drift.

SPECIMEN LABEL

WEEDS/PLANTS CONTROLLED		
alder	Douglas fir	salt-brush *(Baccharis* spp.*)*
arrowwood	dogwood	salt cedar**
ash	elderberry	salmonberry
aspen	elm	sassafras
Australian pine	gallberry	scotch broom
bear clover (bearmat)	hazel	sumac
beech	hornbeam	sweetbay magnolia
birch	kudzu	sweetgum
blackberry	locust	sycamore
blackgum	madrone	tanoak
Brazilian pepper	Maleleuca (seedlings)	thimbleberry
cascara	maples	tulip poplar
ceanothus	mulberry	waxmyrtle
cherry	oaks	western hemlock
Chinese tallow	persimmon	white titi
chinquapin	pine	wild rose
choke cherry	poison ivy	willow
cottonwood	poison oak	winged elm
crataegus (hawthorn)	poplar	yaupon

ANNUAL AND PERENNIAL BROADLEAF WEEDS		
bindweed	field bindweed	smartweed
burdock	lambsquarters	spanishneedles/common beggarticks
Canada thistle	Mexican petunia	tansy ragwort
chicory	plantain	tropical soda apple
curly dock	purple loosestrife(1)	vetch
dandelion	ragweed	wedelia
elephant ear	sericea lespedeza(2)	wild lettuce

*For complete control, retreatment may be necessary.
**Use cut surface treatments for best results.

SPECIMEN LABEL

(1) Purple Loosestrife *(Lythrum salicaria)*

Purple loosestrife can be controlled with foliar applications of **TRYCERA®**. For broadcast applications, use a minimum of 4-1/2 to 6 lbs. ae of triclopyr (6 to 8 quarts of **TRYCERA®**) per acre. Apply **TRYCERA®** when purple loosestrife is at the bud to mid-flowering stage of growth. Follow-up applications for control of regrowth should be made the following year in order to achieve increased control of this weed species. For all applications, a non-ionic surfactant should be added to the spray mixture. Follow all directions and use precautions on the label of the surfactant. Thorough wetting of the foliage and stems is necessary to achieve satisfactory control. A minimum spray volume of 50 gallons per acre is recommended for ground broadcast applications.

If using a backpack sprayer, a spray mixture containing 1% to 1.5% **TRYCERA®** or 5 to 7.6 fl. oz. of **TRYCERA®** per 4 gallons of water should be used. All purple loosestrife plants should be thoroughly wetted.

(2) Sericea Lespedeza

Apply 0.5 to 1.0 lb. ae of triclopyr (1.4 to 2.8 pints of **TRYCERA®**) per acre. For best results, apply after maximum foliage development in the late spring to early summer, but prior to bloom.

APPLICATION METHODS

Use **TRYCERA®** specialty herbicide at rates of 3/4 to 9 lbs. ae of triclopyr (1/4 to 3 gallons of **TRYCERA®**) per acre to control broadleaf weeds and woody plants. In all cases, use the amount specified in enough water to give uniform and complete coverage of the plants to be controlled. Use only water suitable for spraying. Use an agriculturally labeled non-ionic surfactant for all foliar applications. When using surfactants, follow the use directions and precautions listed on the surfactant manufacturer's label. Use the higher concentrations of surfactant in the spray mixture when applying lower spray volumes per acre. The order of addition to the spray tank is water, spray thickening agent (if used), additional herbicide (if used), and **TRYCERA®**. Surfactant should be added to the spray tank last or as recommended on the product label. It combined with emulsifiable concentrate herbicides, moderate continuous adequate agitation is required.

Before using any recommended tank mixtures, read the directions and all use precautions on both labels.

For best results, apply when woody plants and weeds are actively growing. When hard-to-control species such as ash, blackgum, choke cherry, elm, maples, oaks, pines, or winged elm are prevalent and during applications made in late summer when the plants are mature and during drought conditions, use the higher rates of **TRYCERA®** alone or in combination with Tordon® 101 Mixture specialty herbicide. (Tordon® 101 Mixture is a restricted use pesticide. See product label.) Tordon® 101 Mixture is not registered for use in the states of California and Florida.

When using **TRYCERA®** in combination with 2,4-D 3.8 lbs. amine, such as Opti-Amine®, or low volatile ester herbicides, such as Barrage® HF, generally the higher rates should be used for satisfactory brush control.

Use the higher dosage rates when brush approaches an average of 15 feet in height or when the brush covers more than 60% of the area to be treated. If lower rates are used on hard-to-control species, resprouting may occur the year following treatment.

On sites where easy-to-control brush species dominate, rates less than those listed may be effective. Consult State or Local Extension personnel for such information.

FOLIAGE TREATMENT WITH GROUND EQUIPMENT

High-Volume Foliage Treatment

For control of woody plants, use **TRYCERA®** at the rate of 3 to 9 lbs. ae of triclopyr (1 to 4 gallons of **TRYCERA®**) per 100 gallons of spray solution, or **TRYCERA®** at 3/4 to 3 lbs. ae of triclopyr (1 to 6 quarts of **TRYCERA®**) may be tank mixed with 1/4 to 1/2 gallons of 2,4-D 3.8 lbs. amine such as Opti-Amine®, or low-volatile ester, such as Barrage® HF, or Tordon® 101 Mixture and diluted to make 100 gallons of spray solution. Apply at a volume of 100 to 400 gallons of total spray per acre depending upon size and density of woody plants. Coverage should be thorough to wet all leaves, stems, and root collars. (See **General Use Precautions and Restrictions**.) Do not exceed maximum allowable use rates per acre (see table below). Tordon® 101 Mixture is not registered for use in the states of California and Florida.

PRODUCT LABEL

Maximum Labeled Rate versus Spray Volume per Acre

Total Spray Volume (gal./acre)	MAXIMUM RATE OF TRYCERA®		
	Rangeland and Pasture Sites* (gal./100 gals. of spray)	Forestry Sites** (gal./100 gals. of spray)	Other Non-Cropland Sites*** (gal./100 gals. of spray)
400	Do not use	0.5	0.75
300	Do not use	0.67	1
200	Do not use	1	1.5
100	0.67	2	3
50	1.33	4	6
40	1.67	5	7.5
30	2.33	6.65	10
20	3.33	10	15
10	6.67	20	30

*Do not exceed the maximum use rate of 2 lbs. ae of triclopyr (2/3 gal. of **TRYCERA®**)/acre/year.
Do not exceed the maximum use rate of 6 lbs. ae of triclopyr (2 gals. of **TRYCERA®)/acre/year.
***Do not exceed the maximum use rate of 9 lbs. ae of triclopyr (3 gals. of **TRYCERA®**)/acre/year on non-cropland use sites other than rangeland, pasture, forestry, and grazed areas.

LOW-VOLUME FOLIAGE TREATMENT

To control susceptible woody plants, use up to 9 lbs. ae of triclopyr (3 gallons of **TRYCERA®**) in 10 to 100 gallons of finished spray. The spray concentration of **TRYCERA®** and total spray volume per acre should be adjusted according to the size and density of target woody plants and kind of spray equipment used. With low volume sprays, use sufficient spray volume to obtain uniform coverage of target plants including the surfaces of all foliage, stems, and root collars (see **General Use Precautions and Restrictions**). For best results, a surfactant should be added to all spray mixtures. Match equipment and delivery rate of spray nozzles to height and density of woody plants. When treating tall, dense brush, a truck mounted spray gun with spray tips that deliver up to 2 gallons per minute at 40 to 60 psi may be required. Backpack or other types of specialized spray equipment with spray tips that deliver less than 1 gallon of spray per minute may be appropriate for short, low to moderate density brush.

Tank Mixing: As a low-volume foliar spray, up to 9 lbs. ae of triclopyr (3 gallons of **TRYCERA®**) may be applied in tank mix combination with 1/2 to 1 gallon of Tordon® K or 1 to 2 gallons of Tordon® 101 Mixture in 10 to 100 gallons of finished spray. Tordon® 101 Mixture and Tordon® K are not registered for use in the states of California and Florida.

BROADCAST APPLICATIONS WITH GROUND EQUIPMENT

Apply using equipment that will assure uniform coverage of the spray volumes applied. To improve spray coverage, add an agriculturally labeled non-ionic surfactant as described later under **Directions for Use**. See **Maximum Labeled Rate versus Spray Volume per Acre** table above for relationship between mixing rate, spray volume and maximum application rate.

Woody Plant Control

Foliage Treatment: Use 6 to 9 lbs. ae of triclopyr (2 to 3 gallons of **TRYCERA®**) in enough water to make 20 to 100 gallons of total spray per acre or 1-1/2 to 3 lbs. ae of triclopyr (1/2 to 1 gallon of **TRYCERA®**) may be combined with 1 to 2 gallons of 2,4-D 3.8 lbs. amine like Opti-Amine®, or low-volatile esters or Tordon® 101 Mixture in sufficient water to make 20 to 100 gallons of total spray per acre. Tordon® 101 Mixture is not registered for use in the states of California and Florida.

Broadleaf Weed Control
Use **TRYCERA®** at rates of 1 to 4-1/2 lbs. ae of triclopyr (1/3 to 1-1/2 gallons of **TRYCERA®**) in a total volume of 20 to 100 gallons of water per acre. Apply any time during the growing season. **TRYCERA®** at 1 to 3 lbs. ae of triclopyr (1/3 to 1 gallon of **TRYCERA®**) may be tank mixed with 1/2 to 1 gallon of Tordon® K, Tordon® 101 Mixture or 2,4-D 3.8 lbs. amine, such as Opti-Amine® or low-volatile herbicides to improve the spectrum of activity. Tordon® 101 Mixture and Tordon® K are not registered for use in the states of California and Florida.

AERIAL APPLICATION (Helicopter Only)

Aerial sprays should be applied using suitable drift control (see **General Use Precautions and Restrictions**). Add an agriculturally labeled non-ionic surfactant as described under **Directions for Use**. See **Maximum Labeled Rate versus Spray Volume per Acre** table above for relationship between mixing rate, spray volume and maximum application rate.

Foliage Treatment (Non-Grazed Rights-of-Way)
Non-grazed areas: Use 6 to 9 lbs. ae of triclopyr (2 to 3 gallons **TRYCERA®**) or 3 to 4-1/2 lbs. ae of triclopyr (1 to 1-1/2 gallons of **TRYCERA®**) in a tank mix combination with 2 gallons of 2,4-D 3.8 lbs. amine such as Opti-Amine®, or low-volatile esters such as Barrage® HF or Tordon® 101 Mixture, and apply in a total spray volume of 10 to 30 gallons per acre. Use the higher rates and volumes when plants are dense or under drought conditions. Barrage® HF and Tordon® 101 Mixture are not registered for use in the states of California and Florida.

Interspersed areas in non-grazed rights-of-ways that may be subject to grazing may be spot treated if the treated area comprises no more than 10% of the total grazable area.

Mesquite Control Using High-Volume Foliage Treatment: For control of mesquite infestations of low to moderate density, apply **TRYCERA®** specialty herbicide and Reclaim in a tank mixture to individual plants with backpack or hand-held sprayers or a vehicle-mounted sprayer with hand-held spray wand or spray gun. For individual plant treatment, use 2.5 quarts of **TRYCERA®** in combination with 2 quarts of Reclaim per 100 gallons of total spray solution (1/2% v/v of each product). Apply in water or as an oil:water emulsion as described in **Mixing Directions**. If using an oil:water emulsion, add the oil at a rate of 5% of the total spray volume. Apply as a complete spray-to-wet foliar application, including all leaves. Thorough coverage is necessary for good results, but do not spray to the point of runoff. Do not apply when mesquite foliage is wet. The total amount of Reclaim applied should not exceed 1-1/3 pints per acre. For best results, follow information given elsewhere in this label concerning effect of environmental conditions and application timing on control. This application method works best for brush less than 8 feet tall since efficient treatment and thorough coverage of taller brush is difficult to achieve with this method. To minimize drift, select a spray nozzle and pressure that provides good coverage while forming a coarse spray. Additionally, drift may be reduced by using the minimum pressure necessary to obtain plant coverage without forming a mist and by directing sprays no higher than the top of target plants. If desired, a spray dye may be added to the spray mixture to mark the treated plants.

Broadcast Application With Aerial or Ground Equipment
Environmental conditions and application timing influence brush and weed control results. For best results, apply when woody plants and weeds are actively growing: For woody species, apply after the rapid growth period of early spring when leaf tissue is fully expanded and terminal growth has slowed.

Brush regrowth should be at least 4 ft. high prior to treatment to ensure adequate foliage for herbicide absorption. Adequate soil moisture before and after treatment, as well as the presence of healthy foliage at the time of application, are important factors contributing to optimal herbicidal activity.

Use sufficient spray volume to completely and uniformly cover foliage. For ground application, apply 10 gallons or more of total spray volume per acre. For aerial application, apply at least 2 gallons of total spray volume per acre. Use higher spray volumes for ground or aerial applications to ensure adequate coverage with increased depth and density of foliage, particularly for treatment of woody plants.

Mesquite: The herbicidal response of mesquite is strongly influenced by foliage condition, growth stage and environmental conditions. For best results, apply when new growth foliage has turned from light to dark green, when the soil temperature is above 75°F at a depth of 12 to 18 inches, and soil moisture is adequate for plant growth. Apply within 60 days

after the 75°F minimum soil temperature at the 12- to 18-inch depth has been reached. Product performance may be adversely affected if application is made before mesquite foliage has turned from light to dark green or if foliage has been injured or removed by late frost, insects, hail or plant diseases. Do not treat if mesquite exhibits new (light green) terminal growth in response to recent heavy rainfall during the growing season. Rate of soil warm-up at the 12- to 18-inch depth may vary with soil texture and drainage. Coarse-textured (sandy) soils warm up sooner than fine-textured (clay) soils and dry soils warm up more quickly than wet soils. Mesquite regrowth should be at least 4 ft. high prior to treatment to ensure adequate foliage for herbicide absorption.

Mesquite Only
Apply 12 to 24 ounces of **TRYCERA®** per acre in combination with 2/3 to 1-1/3 pint per acre of Reclaim. See label for Reclaim for additional treatment recommendations and information on mesquite control. Apply aerially as an oil:water emulsion in 4 gallons or more total volume per acre or with ground equipment in 10 gallons or more total volume per acre. Use a maximum of 1 gallon of oil per acre for aerial or ground application.

Mesquite and Pricklypear Cactus
If prickly pear cactus is a target species in association with mesquite, apply a tank mix of 12 to 24 ounces of **TRYCERA®** with 1 to 2 pints of Tordon® 22K per acre. (The 2-pints-per-acre rate of Tordon® 22K provides a higher and more uniform plant kill of pricklypear.) Tordon® 22K may also be applied in combination with Reclaim to control prickly pear while providing improved control of mesquite. See labels for Tordon® 22K and Reclaim for additional information and treatment directions. Apply aerially as an oil:water emulsion in 4 gallons or more total volume per acre or with ground equipment in 10 gallons or more total volume per acre. If mesquite canopy is dense, use higher spray volumes. Use a maximum of 1 gallon of oil per acre for aerial or ground application.

South Texas Mixed Brush (Mesquite, Pricklypear Cactus, Blackbrush, Twisted Acacia and Granjeno)
Use 12 to 24 ounces of **TRYCERA®** in a tank mix with 2 pints of Tordon® 22K per acre if pricklypear is a problem or with 2/3 to 1-1/3 pints of Reclaim per acre if mesquite is the prevalent species. **TRYCERA®** contributes to the control of non-legume species such as granjeno and oaks. However, if woody legume species are predominate, apply 2 pints of Tordon® 22K per acre in combination with 2/3 to 1-1/3 pints of Reclaim per acre for improved control. See labels for Tordon® 22K and Reclaim for additional information and second treatment recommendations. Apply aerially in an oil:water emulsion in 4 gallons or more total volume per acre or with ground equipment in 15 gallons or more total volume per acre. Use a maximum of 1 gallon of oil per acre for aerial or ground application. The use of an oil:water emulsion is critical and good spray coverage is essential for acceptable brush control.

Sand Shinnery Oak Suppression
In Texas, New Mexico and Oklahoma, apply **TRYCERA®** alone at a rate of 12 to 24 ounces per acre for suppression of shinnery oak growing on sandy soils. Grass response following suppression may be impressive where rainfall is adequate. Grazing deferment following application together with proper grazing management is recommended to allow for the reestablishment of grass stands.

Post Oak and Blackjack Oak – Regrowth Stands
Apply in the late spring (May) to early summer (June-July) when oak leaves are fully developed (expanded). Use 2.5 quarts of **TRYCERA®** alone or in tank mix combination with 0.5 to 1 pint of 2,4-D low-volatile ester herbicide, such as Barrage® HF, per acre. Apply in an oil:water emulsion or water surfactant dilution in sufficient total volume per acre to assure thorough coverage, usually 5 gallons or more per acre by fixed-wing aircraft or helicopter or 15 to 25 gallons per acre by ground equipment. Use a maximum of 1 gallon of oil per acre for aerial or ground application. Lower rates may be used for suppression only. Control will require at least 3 consecutive treatments. **Note:** Regrowth plants have a large root mass relative to top growth when compared to undisturbed plants. In order for top growth to intercept and translocate enough herbicide to control the roots, delay broadcast treatment until top growth is at least 4 ft. tall.

High-Volume Foliage Treatment: For regrowth less than 4 ft. tall, apply 2.5 quarts of **TRYCERA®** per 100 gallons of water and 2 quarts of surfactant alone or in tank mix combination with 1 gallon of Grazon P+D or 1 quart of Tordon® 22K. Apply as a high volume leaf-stem treatment to individual plants using ground equipment.

Post Oak and Blackjack Oak – Mature Stands
For control of mature stands (greater than 5 ft. tall), apply 2.5 quarts of **TRYCERA®** per acre in late spring (May) to early summer (June-July) when oak leaves are fully developed (expanded). Understory species such as winged elm, buckbrush, tree huckleberry and ash occurring in some areas will not be controlled (only suppressed or defoliated) by using **TRYCERA®** alone. Where these understory species occur, control may be improved by tank mixing 2.5 quarts of **TRYCERA®** with 1 quart of Tordon® 22K or 4 quarts of Grazon P+D per acre. For best results, apply as an oil:water emulsion in a total volume of 5 gallons per acre or more by fixed-wing aircraft or helicopter.

Other Susceptible Woody Plants
Apply 2.5 to 5.25 pints of **TRYCERA®** alone or in combination with 2 to 3 quarts of 3.8 lbs./gal. 2,4-D low-volatile ester or amine such as Opti-Amine® formulation per acre. If difficult-to-control species such as ash, choke cherry, elm, maple or oaks are prevalent, and during applications made when plants are mature late in the summer or during drought conditions, use the higher rates of **TRYCERA®**, alone or with 2,4-D. **TRYCERA®** may also be applied in a tank mixture with Grazon P+D or Tordon® 22K for increased control of certain species. See labels for Grazon P+D and Tordon® 22K for additional information and treatment recommendations. Apply aerially in 4 gallons or more total volume per acre or with ground equipment in 10 gallons or more total volume per acre. For best results on blackberry, apply during or after bloom. For management of kudzu, apply 1 quart of **TRYCERA®** per acre. Repeat application may be necessary to achieve desired level of control.

Susceptible Broadleaf Weeds
Use 2.5 pints of **TRYCERA®** per acre in a water spray. Apply as a broadcast spray in a total volume of 10 gallons or more per acre by ground equipment or aerially in a total volume of 2 gallons or more per acre. Apply anytime the weeds are actively growing. **TRYCERA®** at 1/2 to 4 pints may be tank mixed with 1 to 2 quarts of 3.8 lbs./gal. 2,4-D amine such as Opti-Amine® or low-volatile ester, such as Barrage® HF.

FOREST MANAGEMENT APPLICATIONS

For best control from broadcast applications of **TRYCERA®**, use a spray volume which will provide thorough plant coverage. Recommended spray volumes are usually 10 to 25 gallons per acre by air or 10 to 100 gallons per acre by ground. To improve spray coverage of spray volumes less than 50 gallons per acre, add an agriculturally labeled non-ionic surfactant as described under **Directions for Use**. Application systems should be used to prevent hazardous drift to off-target sites. Nozzles or additives that produce larger droplets of spray may require higher spray volumes to maintain brush control.

Forest Site Preparation (Not for Conifer Release)
Use up to 2 gallons of **TRYCERA®** and apply in a total spray volume of 10 to 30 gallons per acre or **TRYCERA®** at 3 to 4-1/2 lbs. ae of triclopyr (1 to 1-1/2 gallons of **TRYCERA®**) may be used with 1 to 2 gallons of Tordon® 101 Mixture or 2,4-D 3.8 lbs. low-volatile ester in a tank mix combination in a total spray volume of 10 to 30 gallons per acre. Use a non-ionic agricultural surfactant for all foliar applications as described under **Directions for Use**. Tordon® 101 Mixture is not registered for use in the states of California and Florida.

Note: Conifers planted sooner than one month after treatment with **TRYCERA®** at less than 4 lbs. ae of triclopyr (1-1/3 gallons of **TRYCERA®**) per acre or sooner than two months after treatment at 4 to 9 lbs. ae of triclopyr (1-1/3 to 3 gallons of **TRYCERA®**) per acre may be injured. When tank mixtures of herbicides are used for forest site preparation, labels for all products in the mixture should be consulted and the longest recommended waiting period before planting observed.

Directed Spray Applications for Conifer Release
To release conifers from competing hardwoods such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, hickory, alder, birch, aspen, and pin cherry, mix 3 to 6 lbs. ae of triclopyr (1 to 2 gallons of **TRYCERA®**) in enough water to make 100 gallons of spray mixture. To improve spray coverage, add an agriculturally labeled non-ionic surfactant as described under **Directions for Use**. The spray mixture should be directed onto foliage of competitive hardwoods using knapsack or backpack sprayers with flat fan nozzles or equivalent any time after hardwoods have reached full leaf size, but before autumn coloration. The majority of treated hardwoods should be less than 6 feet in height to ensure adequate spray coverage. Care should be taken to direct spray away from contact with conifer foliage, particularly foliage of desirable pines.

Note: Spray may cause temporary damage and growth suppression where contact with conifers occurs; however, injured conifers should recover and grow normally. Over-the-top spray applications can kill pines.

Broadcast Applications for Conifer Release in the Northeastern United States
To release spruce, fir, red pine and white pine from competing hardwoods, such as red maple, sugar maple, striped maple, alder, birch (white, yellow or gray), aspen, ash, pin cherry and *Rubus* spp. and perennial and annual broadleaf weeds, use **TRYCERA®** at rates of 1-1/2 to 3 lbs. ae of triclopyr (2 to 4 quarts of **TRYCERA®**) per acre alone or with 2,4-D amine, like Opti-Amine®, or 2,4-D ester, such as Barrage® HF, to provide no more than 4 lbs. ae per acre from both products. Apply in late summer or early fall after conifers have formed their over-wintering buds and hardwoods are in full leaf and prior to autumn coloration.

Broadcast Applications for Douglas Fir Release in the Pacific Northwest and California (Product not currently registered for use in California)
To release Douglas fir from susceptible competing vegetation such as broadleaf weeds, alder, blackberry or Scotch broom, apply **TRYCERA®** at 1 to 1-1/2 lbs. ae of triclopyr (1-1/3 to 2 quarts of **TRYCERA®**) per acre alone or in combination with 4 lbs. per acre of atrazine. Mix all sprays in a water carrier with a non-ionic surfactant. Apply in early spring after hardwoods begin growth and before Douglas fir bud break ("early foliar hardwood stage) or after Douglas fir seasonal growth has "hardened off" (set winter buds) in late summer, but while hardwoods are still actively growing. When treating after Douglas fir bud set, apply prior to onset of autumn coloration in hardwood foliage. **Note:** Treatments applied during active Douglas fir shoot growth (after spring bud break and prior to bud set) may cause injury to Douglas fir trees.

BASAL BARK AND DORMANT BRUSH TREATMENTS

To control susceptible woody plants in rights-of-way, other non-crop areas, and forests, use **TRYCERA®** in oil or oil-water mixtures prepared and applied as described below. When preparing mixtures, use oils as either a commercially available basal oil, diesel fuel. Substitute other oils or diluents only as recommended by the oil or diluents manufacturer. When mixing with a basal oil or other oils or diluents, read and follow the use directions and precautions on the product label prepared by the oil or diluents manufacturer. See **Table 1** for relationship between mixing rate, spray volume and maximum application rate.

Oil Mixture Sprays
Add **TRYCERA®** to the required amount of oil in the spray tank or mixing tank and mix thoroughly. If the mixture stands over 4 hours, reagitation is required.

Oil mixtures of TRYCERA® and Tordon® K: Tordon® K and **TRYCERA®** may be used in tank mix combination for basal bark treatment of woody plants. These herbicides are incompatible and will not form a stable mixture when mixed together directly in oil. Stable tank mixtures for basal bark application can be made if each product is first combined with a compatibility agent prior to final mixing in the desired ratio. (See product bulletin for mixing instructions.) Tordon® 101 Mixture and Tordon® K are not registered for use in the states of California and Florida.

Oil-Water Mixture Sprays
First, premix the **TRYCERA®**, oil and surfactant in **a separate container**. **Do not allow** any water or mixtures containing water to get into the **TRYCERA®** or the premix. Fill the spray tank about half full with water, then slowly add the premix with continuous agitation and complete filling the tank with water. Continue moderate agitation.

Note: If the premix is put in the tank without any water, the first water added may form a thick invert (water in oil) emulsion which will be hard to break.

Basal Bark Treatment
To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 1 to 5 gallons of **TRYCERA®** in enough oil to make 100 gallons of spray mixture. Apply with knapsack sprayer or power spraying equipment using low pressure (20–40 psi). Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground. Thorough wetting of the indicated area is necessary for good control. Spray until runoff at the ground line is noticeable. Old or rough bark requires more spray than smooth young bark. Apply anytime, including the winter months, except when snow or water prevent spraying to the ground line.

Low-Volume Basal Bark Treatment
To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of **TRYCERA®** in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Spray the basal parts of brush and tree trunks in a manner that thoroughly wets the lower stems, including the root collar area, but not to the point of runoff. Herbicide concentration should vary with size and susceptibility of species treated. Apply at any time, including the winter months, except when snow or water prevent spraying to the ground line or when stem surfaces are saturated with water. See **Table 1** for relationship between mixing rate, spray volume and maximum application rate.

TRYCERA® Plus Tordon® K in Oil Tank Mix: TRYCERA® and a picloram product such as Tordon® K may be applied as a low volume basal bark treatment to improve control of certain woody species such as ash, elm, maple, poplar, aspen, hackberry, oak, oceanspray, birch, hickory, pine, tanoak, cherry, locust, sassafras, and multiflora rose. (See product bulletin for mixing instructions.) Tordon® 101 Mixture and Tordon® K are not registered for use in the states of California and Florida.

Streamline Basal Bark Treatment (Southern States)
To control or suppress susceptible woody plants for conifer release, mix 20 to 30 gallons of **TRYCERA®** in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using equipment that provides a directed straight stream spray. Apply sufficient spray to one side of stems less than 3 inches in basal diameter to form a treated zone that is 6 inches in height. When the optimum amount of spray mixture is applied, the treated zone should widen to encircle the stem within approximately 30 minutes. Treat both sides of stems which are 3 to 4 inches in basal diameter. Direct the spray at bark that is approximately 12 to 24 inches above ground. Pines (loblolly, slash, shortleaf, and Virginia) up to 2 inches in diameter breast height (dbh) can be controlled by directing the spray at a point approximately 4 feet above ground. Vary spray mixture concentration with size and susceptibility of the species being treated. Best results are achieved when applications are made to young vigorously growing stems that have not developed the thicker bark characteristic of slower growing, understory trees in older stands. This technique is not recommended for scrub and live oak species, including blackjack, turkey, post, live, bluejack and laurel oaks, or big leaf maple. Apply from approximately 6 weeks prior to hardwood leaf expansion in the spring until approximately 2 months after leaf expansion is completed. Do not apply when snow or water prevent spraying at the desired height above ground level.

Low-Volume Stem Bark Band Treatment (North Central and Lake States)
To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of **TRYCERA®** in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Apply the spray in a 6- to 10-inch-wide band that completely encircles the stem. Spray in a manner that completely wets the bark, but not to the point of runoff. The treatment band may be positioned at any height up to the first major branch. For best results apply the band as low as possible. Spray mixture concentration should vary with size and susceptibility of species to be treated. Applications may be made anytime, including winter months.

Thinline Basal Bark Treatment
To control susceptible woody plants with stems less than 6 inches in diameter, apply **TRYCERA®** either undiluted or mixed at 50–75% v/v with oil in a thin stream to all sides of the lower stems. The stream should be directed horizontally to apply a narrow band around each stem or clump. Use a minimum of 2 to 15 milliliters of **TRYCERA®** or oil mixture with **TRYCERA®** to treat single stems and from 25 to 100 milliliters to treat clumps of stems. Use an applicator metered or calibrated to deliver the small amounts required.

Dormant Stem Treatment
Dormant stem treatments will control susceptible woody plants and vines with stems less than 2 inches in diameter. Plants with stems greater than 2 inches in diameter may not be controlled and resprouting may occur. This treatment method is best suited for sites with dense, small diameter brush. Dormant stem treatments of **TRYCERA®** can also be used as a chemical side-trim for controlling lateral branches of larger trees that encroach onto roadside, utility, or other rights-of-way. Mix 4.5 to 8.5 quarts of **TRYCERA®** in 2 to 3 gallons of crop oil concentrate such as Agridex or other recommended oil and add this mixture to enough water to make 100 gallons of spray solution. Use continuous adequate agitation. Apply with Radiarc, OC or equivalent nozzles, or handgun using 70 to 100 gallons of spray per acre to ensure uniform coverage

of stems. **TRYCERA®** may be mixed with 2–4 quarts of a 2,4-D ester such as Barrage® HF to improve the control of black cherry and broaden the spectrum of herbicidal activity. In western states, apply anytime after woody plants are dormant. In other areas apply anytime within 10 weeks of budbreak, generally February through April. Do not apply to wet or saturated bark as poor control may result.

CUT SURFACE TREATMENTS

To control unwanted trees of hardwood species such as elm, maple, oak and conifers in labeled sites, apply **TRYCERA®** specialty herbicide, either undiluted or diluted in a 1 to 1 ratio with water, as directed below.

With Tree Injector Method

Apply by injecting 1/2 milliliter of undiluted **TRYCERA®** or 1 milliliter of the diluted solution through the bark at intervals of 3 to 4 inches between centers of the injector wound. The injections should completely surround the tree at any convenient height. **Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is injected directly into plants.**

With Hack and Squirt Method

Make cuts around the tree trunk at a convenient height with a hatchet or similar equipment so that the cuts overlap slightly and make a continuous circle around the trunk. Spray 1/2 milliliter of undiluted **TRYCERA®** or 1 milliliter of the diluted solution into the pocket created between the bark and the inner stem/trunk by each cut.

With Frill Or Girdle Method

Make a single girdle through the bark completely around the tree at a convenient height. The frill should allow for the herbicide to remain next to the inner stem and absorb into the plant. Wet the cut surface with undiluted or diluted solution.

Both of the above methods may be used successfully at any season except during periods of heavy sap flow of certain species – for example, maples.

Stump Treatment

Spray or paint the cut surfaces of freshly cut stumps and stubs with undiluted **TRYCERA®**. The cambium area next to the bark is the most vital area to wet.

CHRISTMAS TREE PLANTATIONS

Use **TRYCERA®** for the control of woody plants and annual and perennial broadleaf weeds in established Christmas tree plantations. For best results, apply when woody plants and weeds are actively growing. **TRYCERA®** does not control weeds which have not emerged at the time of application. If lower rates are used on hard-to-control woody species, resprouting may occur the year following treatment. Brush over 8 feet tall is difficult to treat efficiently using hand equipment such as backpack or knapsack sprayers. When treating large brush or trees or hard-to-control species such as ash, blackgum, choke cherry, elm, hazel, madrone, maples, oaks or sweetgum, and for applications made during drought conditions or in late summer when the leaves are mature, use the higher rates of **TRYCERA®** or use cut surface application methods. For foliar applications, apply in enough water to give uniform and complete coverage of the plants to be controlled. Applications made under drought conditions may provide less than desirable results.

Use Precautions and Restrictions

- Do not use on newly seeded grass until well established as indicated by vigorous growth and development of secondary root system and tillering.
- Newly seeded turf (alleyways, etc.) should be mowed two or three times before any treatment with **TRYCERA®**.
- Do not reseed Christmas tree areas treated with **TRYCERA®** for a minimum of three weeks after application.
- Do not use **TRYCERA®** if legumes, such as clover, are present and injury cannot be tolerated.

Spray Preparation

The order of addition to the spray tank is water, drift control agent (if used), non-ionic agricultural surfactant and **TRYCERA®**. Continue moderate agitation while mixing and spraying. Use a non-ionic agricultural surfactant for all applications. When using surfactants, follow use directions and precautions listed on the manufacturer's label. Use the higher recommended concentrations of surfactant in the spray mixture when applying lower spray volumes per acre.

Application

Apply In late summer or early autumn after terminal growth of Christmas trees has hardened of, but before leaf drop of, target weeds. Apply at a rate of 3/4 to 1-3/4 lbs. ae of triclopyr (2 to 5 pints of **TRYCERA®**) per acre as a foliar spray directed toward the base of Christmas trees. Use sufficient spray volume to provide uniform coverage of target plants (20 to 100 gallons per acre). Do not apply with 2,4-D. Application rates of **TRYCERA®** recommended for Christmas trees will only suppress some well established woody plants that are greater than 2 to 3 years old (see table below). Broadcast sprays may also be applied in bands between the rows of planted trees. Use spray equipment that will assure uniform coverage of the desired spray volume.

Spray solution from TRYCERA® can cause needle and branch injury to Christmas trees. To minimize injury to Christmas trees, direct sprays so as to minimize contact with foliage. Blue spruce, white spruce, balsam fir and Frasier fir are less susceptible to injury than white pine and Douglas fir.

Restriction: Apply **TRYCERA®** only to established Christmas trees that were planted at least one full year prior to application.

APPLICATION RATES AND SPECIES CONTROLLED IN ESTABLISHED CHRISTMAS TREES		
2 pints/acre (3/4 lb. ae of triclopyr)	**3 to 4 pints/acre (1-1/2 lbs. ae of triclopyr)**	**5 pints/acre (1-3/4 lbs. ae of triclopyr)**
clover dandelion dock, curly lambsquarters lespedeza plantain, broadleaf plantain, buckhorn ragweed, common vetch	bindweed, field (TG) blackberry* chicory (S) fireweed ivy, ground lettuce, wild oxalis poison ivy smartweed (TO) thistle, Canada (TG) violet, wild Virginia creeper*	arrowwood (SDL) aspen beech (SDL) birch (SDL) chinquapin cottonwood (SDL) elderberry grape, wild mulberry (SDL) poplar (SDL) sassafras (SDL) sumac (SDL) sycamore (SDL)

(S) Suppression
(SDL) Seedlings less than 2 to 3 years old
(TG) Top growth control, retreatment may be necessary

*Use 4-pint-per-acre rate

Directed Applications

To control hardwoods such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, alder, birch, aspen, and pin cherry, mix 5 to 28 fl. oz. of **TRYCERA®** in enough water to make 3 gallons of spray mixture. For directed applications, do not exceed 6 lb. ae of triclopyr (2 gallons of **TRYCERA®**) per acre per year. To improve coverage, add a non-ionic agricultural surfactant to the spray. This spray mixture should be directed onto foliage of competitive hardwoods using knapsack or backpack sprayers with flat fan nozzles or equivalent any time after hardwoods have reached full leaf size, but before autumn coloration (when plants are actively growing). The majority of treated hardwoods should be less than 8 feet in height to ensure adequate spray coverage. **Note:** To prevent Christmas tree injury, care should be taken to direct spray away from contact with Christmas tree foliage.

Cut Surface Treatments

When treating large brush or trees or hard-to-control species such as ash, blackgum, choke cherry, elm, hazel, madrone, maples, oaks, salt cedar or sweetgum, and for applications made during drought conditions or in late summer when the leaves are mature, use cut surface treatments. (See directions for **Cut Surface Treatments** in preceding section of this label.)

SPECIMEN LABEL

WETLAND SITES IN PRODUCTION FORESTS AND INDUSTRIAL NON-CROP AREAS

TRYCERA® specialty herbicide may be used within production forests and industrial non-crop sites to control target vegetation in and around standing water sites, such as marshes, wetlands, and the banks of ponds and lakes and transition areas between upland and lowland sites.

For control of woody plants and broadleaf weeds in these sites, follow use directions and application methods on this label for forestry and non-cropland sites.

Use Precautions

Minimize overspray to open water when treating target vegetation in and around non-flowing, quiescent or transient water. When making applications to control unwanted plants on banks or shorelines of flowing water, minimize overspray to open water. **Note:** Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat such areas.

General Information for Aquatic and Wetland Sites

Use **TRYCERA®** specialty herbicide for control of immersed, submersed and floating aquatic plants in aquatic sites such as ponds, lakes, reservoirs, non-irrigation canals, and ditches which have little or no continuous outflow, marshes and wetlands, including broadleaf and woody vegetation on banks and shores within or adjacent to these and other aquatic sites.

Obtain Required Permits: Consult with appropriate State or local water authorities before applying this product to public waters. State or local public agencies may require permits.

General Use Precautions and Restrictions

In Arizona: The state of Arizona has not approved **TRYCERA®** for use on plants grown for commercial production, specifically forests grown for commercial timber production, or on designated grazing areas.

When applying this product in tank mix combination, follow all applicable use directions, precautions and limitations on each manufacturer's label.

Chemigation: Do not apply this product through any type of irrigation system.

Irrigation: Do not use treated water for irrigation for 120 days following application. As an alternative to waiting 120 days, treated water may be used for irrigation once the triclopyr level in the intake water is determined to be non-detectable by laboratory analysis (immunoassay). There is no restriction on use of water from the treatment area to irrigate established grasses.

Water treated with **TRYCERA®** may not be used for irrigation purposes for 120 days after application or until residue levels of **TRYCERA®** are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less.

Seasonal Irrigation Waters: TRYCERA® may be applied during the off-season to surface waters that are used for irrigation on a seasonable basis provided that there is a *minimum* of 120 days between applying **TRYCERA®** and the first use of treated water for irrigation purposes, or until residue levels of **TRYCERA®** are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less.

Aquatic Weed Control

Irrigation Canals/Ditches: Do not apply **TRYCERA®** to irrigation canals/ditches unless the 120-day restriction on irrigation water usage can be observed or residue levels of **TRYCERA®** are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less. Do not apply **TRYCERA®** directly to, or otherwise permit it to come into direct contact with grapes, tobacco, vegetable crops, flowers, or other desirable broadleaf plants, and do not permit spray mists containing it to drift into them.

- **Do not** apply to salt water bays or estuaries.
- **Do not** apply directly to unimpounded rivers or streams.
- **Do not** apply on ditches or canals currently being used to transport irrigation water or that will be used for irrigation within 4 months following treatment. It is permissible to treat irrigation and non-irrigation ditch banks.
- **Do not** apply where runoff water may flow onto agricultural land as injury to crops may result.
- When making applications to control unwanted plants on banks or shorelines of moving water sites, minimize overspray to open water.

PROOF LABEL

- The use of a mistblower is not recommended.
- Apply no more than 2 lbs. ae of triclopyr (2/3 gallon of Canon 3A) per acre per growing season on range and pasture sites, including rights-of-way, fence rows or any area where grazing or harvesting is allowed.
- On forestry sites, **TRYCERA®** may be used at rates up to 6 lbs. ae of triclopyr (2 gallons of **TRYCERA®**) per acre per year.
- For all terrestrial use sites other than range, pasture, forestry sites, and grazed areas, the maximum application rate is 9 lbs. ae triclopyr (3 gallons of **TRYCERA®**) per acre per year.

Precautions for Potable Water Intakes for Emerged Aquatic Weed Control

See chart below for specific setback distances near functioning potable water intakes. **Note:** Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes.

Area Treated (acres)	TRYCERA Application Rate, qts./acre			
	2 qts./acre	4 qts./acre	6 qts./acre	8 qts./acre
	Setback Distance (ft.)			
4	0	200	400	500
>4–8	0	200	700	900
>8–16	0	200	700	1000
>16	0	200	900	1300

Precautions for Potable Water Intakes for Submerged Aquatic Weed Control

For applications of **TRYCERA®** to control submerged weeds in lakes, reservoirs, or ponds that contain a functioning potable water intake for human consumption, see the chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

Area Treated (acres)	Concentration of Triclopyr Acid in Water (ppm ae)				
	0.75 ppm	1.0 ppm	1.5 ppm	2.0 ppm	2.5 ppm
	Required Setback Distance (ft.) from Potable Water Intake				
<4	300	400	600	800	1000
>4–8	420	560	840	1120	1400
>8–16	600	800	1200	1600	2000
>16–32	780	1040	1560	2080	2600
>32 acres, calculate a setback using the formula for the appropriate rate	Setback (ft.) = (800* ln [acres] – 160)/3.33	Setback (ft.) = (800* ln [acres] – 160)/2.50	Setback (ft.) = (800* ln [acres] – 160)/1.67	Setback (ft.) = (800* ln [acres] – 160)/1.25	Setback (ft.) = (800* ln [acres] – 160)

Example Calculation 1: to apply 2.5 ppm **TRYCERA®** to 50 acres:

Setback in feet = (800 x ln (50 acres) – 160
= (800 x 3.912) – 160
= 2,970 feet

Example Calculation 2: to apply 0.75 ppm **TRYCERA®** to 50 acres:

$$\text{Setback in feet} = \frac{(800 \times \ln(50 \text{ acres}) - 160}{3.33}$$

$$= \frac{(800 \times 3.912) - 160}{3.33}$$

= 892 feet

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes.

To apply **TRYCERA®** around and within the distances noted above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 parts per million (ppm) or less by laboratory analysis or immunoassay.

- Recreational Use of Water in Treatment Area: There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.
- Livestock Use of Water from Treatment Area: There are no restrictions on livestock consumption of water from the treatment area.

Aquatic Weeds

Alligatorweed	Nuphar (spatterdock)	Water hyacinth
American lotus	Parrotfeather*	Waterlily
American frogbit	Phragmites	Waterprimrose
Aquatic soda apple	Pickerelweed	Watershield
Eurasian watermiltoil	Pennywort	
Milfoil species	Purple loosestrife	

*Retreatment may be needed to achieve desired level of control.

Application Methods

Floating and Emerged Weeds

For control of water hyacinth, alligatorweed (see specific directions below), and other susceptible emerged and floating herbaceous weeds and woody plants, apply 1-1/2 to 6 lbs. ae of triclopyr (2 to 8 quarts of **TRYCERA®** specialty herbicide) per acre as a foliar application using surface or aerial equipment. Use higher rates in the rate range when plants are mature, when the weed mass is dense, or for difficult-to-control species. Repeat as necessary to control regrowth and plants missed in the previous operation, but do not exceed a total of 6 lbs. ae of triclopyr (8 quarts of **TRYCERA®**) per acre per annual growing season.

Use a non-ionic surfactant in the spray mixture to improve control. Follow all directions and use precautions on the aquatic surfactant label.

Apply when plants are actively growing.

Surface Application

Use a spray boom, handgun or other similar suitable equipment mounted on a boat or vehicle. Thorough wetting of foliage is essential for maximum effectiveness. Use 20 to 200 gallons per acre of spray mixture. Special precautions such as the use of low spray pressure, large droplet producing nozzles or addition of a labeled thickening agent may minimize spray drift in areas near sensitive crops.

Aerial Application (Helicopter Only)

Apply with a helicopter using a Microfoil or Thru-Valve boom, or a drift control additive in the spray solution. Apply in a minimum of 10 gallons of total spray mix per acre. Do not apply when weather conditions favor drift to sensitive areas. See label section on aerial application directions and precautions.

Water hyacinth *(Eichhornia crassipes)*

Apply **TRYCERA®** at 1-1/2 to 6 lbs. ae of triclopyr (2 to 8 quarts of **TRYCERA®**) per acre to control water hyacinth. Apply when plants are actively growing. Use the higher rate in the rate range when the weed mass is dense. It is important to thoroughly wet all foliage with the spray mixture. Use a non-ionic surfactant in the spray mixture. A repeat treatment may be needed to control regrowth or plants missed in the previous treatment.

Alligatorweed *(Alternanthera philoxeroides)*
Apply **TRYCERA®** at 2 to 6 lbs. ae of triclopyr (3 to 8 quarts of **TRYCERA®**) per acre to control Alligatorweed. It is important to thoroughly wet all foliage with the spray mixture. For best results, add an approved non-ionic aquatic surfactant to the spray mixture. Alligatorweed growing outside the margins of a body of water can be controlled with this treatment. However, alligatorweed growing in water will only be partially controlled. Top growth above the water will be controlled, but the plant will likely regrow from tissue below the water surface.

Precautions for Potable Water Intakes – Lakes, Reservoirs, Ponds:
For applications of **TRYCERA®** to control floating and emerged weeds in lakes, reservoirs or ponds that contain a functioning potable water intake for human consumption, see chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

Area Treated (acres)	TRYCERA Application Rate, qts./acre			
	2 qts./acre	4 qts./acre	6 qts./acre	8 qts./acre
<4	0	200	400	500
>4–8	0	200	700	900
>8–16	0	200	700	1000
>16	0	200	900	1300

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent 10 potable water intakes.

To apply **TRYCERA®** around and within the distances noted above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 parts per million (ppm) or less by laboratory analysis or immunoassay.

- **Recreational Use of Water in Treatment Area:** There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.
- **Livestock Use of Water from Treatment Area:** There are no restrictions on livestock consumption of water from the treatment area.

Submerged Weeds
For control of Eurasian watermilfoil *(Myriophyllum spicatum)* and other susceptible submerged weeds in ponds, lakes, reservoirs, and in non-irrigation canals or ditches that have little or no continuous outflow, apply **TRYCERA®** as either a surface or subsurface application. Rates should be selected according to the rate chart below to provide a triclopyr concentration of 0.75 to 2.5 ppm ae in treated water. Use higher rates in the rate range in areas of greater water exchange. These areas may require a repeat application. However, total application of **TRYCERA®** must not exceed an application rate of 2.5 ppm of triclopyr for the treatment area per annual growing season.

Apply in spring or early summer when Eurasian watermilfoil or other submersed weeds are actively growing.

Areas near susceptible crops or other desirable broadleaf plants may be treated by subsurface injection applied by boat to avoid spray drift.

Subsurface Application
Apply desired amount of **TRYCERA®** per acre directly into the water through boat-mounted distribution systems. When treating target plants that are 6 feet below the surface of the water, trailing hoses should be used along with an aquatic approved sinking agent (except California).

Surface Application
Apply the desired amount of **TRYCERA®** as either a concentrate or a spray mixture in water. However, use a minimum spray volume of 5 gallons per acre. Do not apply when weather conditions favor drift to sensitive areas.

Average water depth (feet) x 0.905 x target concentration (ppm) = gallons of **TRYCERA®** per surface acre treated.

Example: to achieve a 2 ppm concentration of triclopyr in water averaging 4 feet deep
4 x 0.905 x 2 ppm = 7.2 gallons of **TRYCERA®** per surface acre treated.

Water Depth (ft.)	Concentration of Triclopyr Acid in Water (ppm ae)				
	0.75 ppm	1.0 ppm	1.5 ppm	2.0 ppm	2.5 ppm
	Gallons of TRYCERA® per Surface Acre at Specified Depth				
1	0.7	0.9	1.4	1.8	2.3
2	1.4	1.8	2.7	3.6	4.6
3	2.1	2.7	4.1	5.4	6.8
4	2.7	3.6	5.4	7.2	9.1
5	3.4	4.5	6.8	9	11.36
6	4.1	5.4	8.1	10.9	13.6
7	4.8	6.3	9.5	12.7	15.8
8	5.5	7.2	10.9	14.5	18.1
9	6.1	8.1	12.2	16.3	20.4
10	6.8	9	13.6	18.1	22.6
15	10.2	13.6	20.4	27.2	33.9
20	13.6	18.1	27.2	36.2	45.3

Precautions for Potable Water Intakes – Lakes, Reservoirs, Ponds:
For applications of **TRYCERA®** to control submerged weeds in lakes, reservoirs or ponds that contain a functioning potable water intake for human consumption, see the chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

Area Treated (acres)	Concentration of Triclopyr Acid in Water (ppm ae)				
	0.75 ppm	1.0 ppm	1.5 ppm	2.0 ppm	2.5 ppm
	Required Setback Distance (ft.) from Potable Water Intake				
<4	300	400	600	800	1000
>4–8	420	560	840	1120	1400
>8–16	600	800	1200	1600	2000
>16–32	780	1040	1560	2080	2600
>32 acres, calculate a setback using the formula for the appropriate rate	Setback (ft.) = (800* ln [acres] – 160)/3.33	Setback (ft.) = (800* ln [acres] – 160)/2.50	Setback (ft.) = (800* ln [acres] – 160)/1.67	Setback (ft.) = (800* ln [acres] – 160)/1.25	Setback (ft.) = (800* ln [acres] – 160)/3.33

Example Calculation 1: to apply 2.5 ppm **TRYCERA®** to 50 acres:
Setback in feet = (800 x ln (50 acres) – 160
= (800 x 3.912) – 160
= 2,970 feet

SPECIMEN LABEL

Example Calculation 2: to apply 0.75 ppm **TRYCERA®** to 50 acres:

$$\text{Setback in feet} = \frac{(800 \times \ln(50 \text{ acres}) - 160}{3.33}$$

$$= \frac{(800 \times 3.912) - 160}{3.33}$$

$$= 892 \text{ feet}$$

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes.

To apply **TRYCERA®** around and within the distances noted above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 parts per million (ppm) or less by laboratory analysis or immunoassay.

- **Recreational Use of Water in Treatment Area:** There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.
- **Livestock Use of Water from Treatment Area:** There are no restrictions on livestock consumption of water from the treatment area.

Wetland Sites

Wetlands include flood plains, deltas, marshes, swamps, bogs, and transitional areas between upland and lowland sites. Wetlands may occur within forests, wildlife habitat restoration and management areas, and similar sites as well as areas adjacent to or surrounding domestic water supply reservoirs, lakes and ponds.

For control of woody plants and broadleaf weeds in these sites, follow use directions and application methods on this label for terrestrial sites associated with wetland areas.

Use Precautions

Minimize overspray to open water when treating target vegetation in and around non-flowing, quiescent or transient water. When making applications to control unwanted plants on banks or shorelines of flowing water, minimize overspray to open water. **Note:** Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat such areas.

Purple Loosestrife *(Lythrum salicaria)*

Purple loosestrife can be controlled with foliar applications of **TRYCERA®**. For broadcast applications, use a minimum of 4-1/2 to 6 lbs. ae of triclopyr (6 to 8 quarts of **TRYCERA®**) per acre. Apply **TRYCERA®** when purple loosestrife is at the bud to mid-flowering stage of growth. Follow-up applications for control of regrowth should be made the following year in order to achieve increased control of this weed species. For all applications, a non-ionic surfactant should be added to the spray mixture. Follow all directions and use precautions on the label of the surfactant. Thorough wetting of the foliage and stems is necessary to achieve satisfactory control. A minimum spray volume of 50 gallons per acre is recommended for ground broadcast applications.

If using a backpack sprayer, a spray mixture containing 1% to 1.5% Canon 3A or 5 to 7.6 fl. oz. of **TRYCERA®** per 4 gallons of water should be used. All purple loosestrife plants should be thoroughly wetted.

Phragmites *(Phragmites australis)*

Phragmites can be selectively controlled with foliar applications of **TRYCERA®**. For broadcast applications, a minimum of 2-1/4 lbs. ae of triclopyr (3 quarts of **TRYCERA®**) per acre should be used. For optimum control, apply **TRYCERA®** when phragmites is in the early sate of growth, 1/2 to 3 feet in height, prior to seed head development. Follow-up applications for control of regrowth may be made the following year in order to achieve increased control of this weed species. For all applications, a non-ionic surfactant labeled for aquatics should be added to the spray mixture. Follow all directions and use precautions on the label of the surfactant. Thorough wetting of the foliage and stems is necessary to achieve use precautions on the label of the surfactant. Thorough wetting of the foliage and stems is necessary to achieve satisfactory control. A minimum spray volume of 50 gallons per acre is recommended for ground broadcast applications.

If a backpack sprayer is used, a spray mixture containing 1% to 1.5% of **TRYCERA®** or 5 to 7.6 fl. oz. of **TRYCERA®** per 4 gallons of water should be used. All phragmites foliage should be thoroughly wetted.

Aerial application by helicopter may be needed when treating restoration sites that are inaccessible, remote, difficult to traverse, isolated, or otherwise unsuited to ground application, or in circumstances where invasive exotic weeds dominate native plant populations over extensive areas and efforts to restore native plant diversity are conducted. By air, apply in a minimum spray volume of 30 gallons per acre using Thru-Valve or Microfoil boom only.

- **Recreational Use of Water in Treatment Area:** There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.
- **Livestock Use of Water from Treatment Area:** There are no restrictions on livestock consumption of water from the treatment area.

TERRESTRIAL SITES ASSOCIATED WITH WETLAND AREAS

- Apply no more than 2 lbs. ae of triclopyr (2/3 gallon of **TRYCERA®**) per acre per growing season on range and pasture sites, including rights-of-way, fence rows or any area where harvesting is allowed. For areas where grazing is allowed, use a maximum single application of 1 lb. ae of triclopyr (2/3 gallon of **TRYCERA®**) per acre per growing season.
- On forestry sites, **TRYCERA®** may be used at rates up to 6 lbs. ae of triclopyr (2 gallons of **TRYCERA®**) per acre per year.

Use **TRYCERA®** specialty herbicide at rates of 3/4 to 6 lbs. ae of triclopyr (1/4 to 2 gallons of **TRYCERA®**) per acre to control broadleaf weeds and woody plants. In all cases use the amount specified in enough water to give uniform and complete coverage of the plants to be controlled. Use only water suitable for spraying. Use a labeled non-ionic surfactant for all foliar applications. When using surfactants, follow the use directions and precautions listed on the surfactant manufacturer's label. Use the higher recommended concentrations of surfactant in the spray mixture when applying lower spray volumes per acre. The order of addition to the spray tank is water, spray thickening agent (if used), additional herbicide (if used), and **TRYCERA®**. A labeled aquatic surfactant should be added to the spray tank last or as recommended on the product label. If combined with emulsifiable concentrate herbicides, moderate continuous adequate agitation is required.

Before using any recommended tank mixtures, read the directions and all use precautions on both labels.

For best results, apply when woody plants and weeds are actively growing. When hard-to-control species such as ash, blackgum, choke cherry, maples, or oaks are prevalent and during applications made in late summer when the plants are mature and during drought conditions, use the higher rates of **TRYCERA®**.

When using **TRYCERA®** in combination with a 2,4-D herbicide approved for aquatic use, such as Hardball®, generally the higher rates should be used for satisfactory brush control.

Use the higher dosage rates when brush approaches an average of 15 feet in height or when the brush covers more than 60% of the area to be treated. If lower rates are used on hard to control species, resprouting may occur the year following treatment.

High-Volume Foliage Treatment

For control of woody plants, use **TRYCERA®** at the rate of 3 to 6 lbs. ae of triclopyr (1 to 2 gallons of **TRYCERA®**) per 100 gallons of spray solution, or **TRYCERA®** at 3/4 to 3 lbs. ae of triclopyr (1 to 4 quarts of **TRYCERA®**) may be tank mixed with 1/4 to 1/2 gallon of 2,4-D 3.8 lbs. amine, like Opti-Amine®, diluted to make 100 gallons of spray solution. Apply at a volume of 100 to 400 gallons of total spray per acre depending upon size and density of woody plants. Coverage should be thorough to wet all leaves, stems, and root collars. (See **General Use Precautions and Restrictions**.) Do not exceed the maximum allowable use rate of 6 lbs. ae of triclopyr (2 gallons of **TRYCERA®**) per acre per growing season.

(continued)

Low-Volume Foliage Treatment
To control susceptible woody plants, apply up to 9 lbs. ae of triclopyr (3 gallons of **TRYCERA®**) in 10 to 100 gallons of finished spray. The spray concentration of **TRYCERA®** and total spray volume per acre may be adjusted according to the size and density of target woody plants and kind of spray equipment used. With low volume sprays, use sufficient spray volume to obtain uniform coverage of target plants including the surfaces of all foliage, stems, and root collars (see **General Use Precautions and Restrictions**). For best results, a labeled aquatic surfactant should be added to all spray mixtures. Match equipment and delivery rate of spray nozzles to height and density of woody plants. When treating tall, dense brush, a truck mounted spray gun with spray tips that deliver up to 2 gallons per minute at 40 to 60 psi may be required. Backpack or other types of specialized spray equipment with spray tips that deliver less than 1 gallon of spray per minute may be appropriate for short, low to moderate density brush.

Cut Surface Treatments (Woody Plants)
To control unwanted trees and other listed woody plants, apply **TRYCERA®**, either undiluted or diluted in a 1-to-1 ratio with water as directed below.

With Tree Injector Method
Apply by injecting 1/2 milliliter of undiluted **TRYCERA®** or 1 milliliter of the diluted solution through the bark at intervals of 3 to 4 inches between centers of the injector wound. The injections should completely surround the tree at any convenient height. **Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is injected directly into plants.**

With Hack and Squirt Method
Make cuts at a convenient height around the tree trunk with a hatchet or similar equipment so that the cuts overlap slightly and make a continuous circle around the trunk. Spray 1/2 milliliter of undiluted **TRYCERA®** or 1 milliliter of the diluted solution into each cut.

With Frill or Girdle Method
Make a single girdle through the bark completely around the tree at a convenient height. Wet the cut surface with undiluted or diluted solution.

Both of the above methods may be used successfully at any season except during periods of heavy sap flow of certain species – for example, maples.

Stump Treatment
Spray or paint the cut surfaces of freshly cut stumps and stubs with undiluted **TRYCERA®**. The cambium area next to the bark is the most vital area to wet.

SPECIMEN LABEL

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Store above 28°F or agitate before use.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Seal all openings which have been opened during use. Return the empty container to a collection site designated by Helena Chemical Company. If the container has been damaged and cannot be returned according to the recommended procedures, contact Helena Chemical Company Customer Service Center at 1-800-258-1470 to obtain proper handling instructions.

SPECIMEN LABEL

Terms and Conditions of Use

If terms of the following **Warranty Disclaimer**, **Inherent Risks of Use**, and **Limitation of Remedies** are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under **Warranty Disclaimer**, **Inherent Risks of Use** and **Limitations of Remedies**.

Warranty Disclaimer

Helena Chemical Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent consistent with applicable law, Helena Chemical Company MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Helena Chemical Company or the seller. All such risks shall be assumed by buyer.

CONDITIONS OF SALE – LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Read the Conditions of Sale – Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. To the extent consistent with applicable law, the Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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TORDON® is a registered trademark of Dow AgroSciences, LLC.

Safety Data Sheet

1. Identification

Product Name : Trycera
Synonyms : None
Product Use : Selective Broadleaf Herbicide
Manufacturer/Supplier : Helena Chemical Company
Address : 225 Schilling Blvd. Collierville, TN 38017
General Information : 901-761-0050
Transportation Emergency Number : CHEMTREC:800-424-9300

2. Hazard Identification

Signal Word : Danger
Skin Irritation : Slightly irritating to the skin; mean over time period is 0.53
Eye Irritation : Severely irritating to the eye with irreversible damage
Acute Toxicity Oral : LD50 1,030 mg/kg (female rat)
Acute Toxicity Dermal : LD50 >2,000 mg/kg (female rat)

Hazard Categories : Oral/Dermal/Inhalation Toxicity-4/5/4; Eye/Skin Irritation-1/3

Hazard Statement : Harmful if swallowed
May be harmful in contact with skin
Causes serious eye damage
Causes mild skin irritation
Harmful if inhaled

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid	55335-06-3	29.4
Inert ingredients, including surfactants and solvents.	Nonhazardous	70.6

4. First Aid Measures

Eye : Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.
Skin : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation : Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion : Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth if unconscious.
Indication of Immediate Medical Attention and Special Treatment Needed : Probable mucosal damage may contraindicate the use of gastric lavage.

5. Fire Fighting Measures

Extinguishing Media	: Use foam, water fog, water spray, dry chemical or carbon dioxide extinguishing agents.
Specific Hazards Arising from the Chemical	: Under fire conditions, this material may emit toxic and irritating vapors.
Special Fire Fight Proc	: Wear self-contained breathing apparatus and full protective clothing. Contain and dispose of fire control water.

6. Accidental Release Measures

Personal Precautions	: Keep unprotected and unnecessary personnel out of spill area.
Protective Equipment	: Splashproof goggles or face shield, chemical-resistant gloves, long-sleeved shirt and long pants, shoes plus socks. Respiratory protection not normally needed. Eyewash and emergency shower should be available in work area.
Emergency Procedures	: Do not contaminate water supplies with spilled material.
Methods and Materials for Containment and Cleanup	: Contain spill using an absorbent or impervious material, such as clay, sand or earth. Collect and place in chemical waste containers for proper disposal.

7. Handling and Storage

Precautions for Safe Handling	: Do not contaminate water, food or feed by storage and disposal. Open dumping is prohibited.
Conditions for Safe Storage	: Store at temperatures above 28 Degrees F.

8. Exposure Controls / Personal Protection

TLV/PEL	: No TLV or PEL has been set for triclopyr, the active ingredient.
Appropriate Engineering Controls	: General and/or local exhaust should be sufficient.
Personal Protective Equipment	: Splashproof goggles or face shield, chemical-resistant gloves, long-sleeved shirt and long pants, shoes plus socks. Respiratory protection not normally needed. Eyewash and emergency shower should be available in work area.

9. Physical and Chemical Properties

Odor/Appearance	: Clear light yellow to amber liquid;surfactant odor
Flash Point, ^{0}F	: >200 Degrees F.
Boiling Point, ^{0}F	: >212 Degrees F.
Melting Point(Freezing point), ^{0}C	: Not applicable
Vapor Pressure, mm Hg @ 20 ^{0}C	: Not determined
Vapor Density	: Not determined
Solubility in Water	: Emulsifiable
Molecular Formula	: Not applicable, formulated mixture.
Density, g/mL @ 25 ^{0}C	: 1.125-1.160
Evaporation Rate(Butyl Acetate = 1)	: Not determined
Octanol/Water Partition Coefficient	: No information found
pH	: 2.2 to 3.2 (1%)
Flammable Limits (approximate volume % in air)	: Not determined
Auto-ignition Temperature	: Not determined
Decomposition temperature	: No information found

10. Stability and Reactivity

Reactivity	: No information found
Chemical Stability	: Stable
Hazardous Decomposition Products	: May produce carbon monoxide, nitrogen oxides, hydrogen chloride and phosgene if in a fire.
Hazardous Polymerization	: Will not occur
Conditions to Avoid	: Product will burn. Keep away from heat and open flames.
Incompatible Materials	: Avoid contact or storage with acids, bases and strong oxidizers.

11. Toxicological Information

Acute Toxicity (Oral LD50)	: 1,030 mg/kg (female rats). Harmful if swallowed.
Acute Toxicity (Dermal LD50)	: >2,000 mg/kg (female rats). May be harmful in contact with skin.
Acute Toxicity Inhalation LC50	: 1.32 mg/L (rats). Harmful if inhaled.
Likely Routes of Exposure	: Eyes, skin, inhalation, ingestion.
Skin Irritation	: Causes mild skin irritation.
Eye Irritation	: Causes serious eye damage.
Skin Sensitization	: Not a contact sensitizer.
Carcinogenic	: Not listed by IARC, NTP or OSHA.
Chronic Effects	: None currently known.
Other Hazards	: None currently known.

12. Ecological Information

Ecotoxicity	: Under certain conditions, treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants, which may contribute to fish suffocation.
Persistence and Degradability	: No information found
Bioaccumulative Potential	: No information found
Mobility in Soil	: No information found
Other Adverse Effects	: Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

13. Disposal Considerations

Waste Disposal Method	: This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

14. Transport Information

UN Proper Shipping Name	: Not regulated by DOT.
Transport Hazard Class	: None
UN Identification Number	: None
Packaging Group	: None
Environmental Hazards	: None
Transport in Bulk	: None
Special Precautions for Transportation	: None
Freight Classification	: Pesticides, NOI, Herbicides, Other than Poison (NMFC Item 155050, Sub 11, Class 70)

15. Regulatory Information

National Fire Protection Association Rating :

Health: 1 Fire: 1 Reactivity: 0

Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

S.A.R.A Title III Hazard Classification (Yes/No) :

Immediate(Acute) Health:	Y
Delayed (Chronic) Health:	Y
Sudden Release of Pressure:	N
Fire:	N
Reactive:	N

FIFRA Information : This Chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Registration Number : 5905-580

FIFRA Signal Word : Danger

FIFRA Label Statement : Keep out of reach of children.

FIFRA Label Statement : Corrosive.

FIFRA Label Statement : Causes irreversible eye damage.

FIFRA Label Statement : Harmful if swallowed or absorbed through skin.

FIFRA Label Statement : Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

FIFRA Label Statement : Do not get in eyes or on skin or clothing.

FIFRA Label Statement : No additional label statements.

16. Other Information

Data of Preparation/Revision : 27-August-2015

SAFETY DATA SHEET

Issuing Date 02-Dec-2011 **Revision Date** 10-Nov-2014 **Revision Number** 0

The supplier identified below generated this SDS using the UL SDS template. UL did not test, certify, or approve the substance described in this SDS, and all information in this SDS was provided by the supplier or was reproduced from publically available regulatory data sources. UL makes no representations or warranties regarding the completeness or accuracy of the information in this SDS and disclaims all liability in connection with the use of this information or the substance described in this SDS. The layout, appearance and format of this SDS is © 2014 UL LLC. All rights reserved.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Turtle Wax Super Hard Shell Paste Wax**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Automotive Wax (All types but Hard Paste)

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Turtle Wax, Inc
Supplier Address 625 Willowbrook Ctr Pky
Willowbrook
Illinois
60527
US
Supplier Phone Number Phone:(800)887-8539
Fax:(630)455-3868
Contact Phone(630)455-3700
Supplier Email mschulz@turtlewax.com
Distributor
Wal-Mart Stores Incorporated
Bentonville, AR USA 72716

Emergency telephone number

Company Emergency Phone Number (800)887-8539

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin sensitization	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Warning**

Hazard Statements
May cause an allergic skin reaction

Appearance Green **Physical State** Solid Gel Consistency Solid **Odor** Earthy

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label)

Skin
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity
9.049% of the mixture consists of ingredient(s) of unknown toxicity

Other information

Harmful to aquatic life with long lasting effects
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

.

Chemical Name	CAS No.	Weight-%	Trade Secret
Petroleum distillates, hydrotreated light	64742-47-8	3 - 7	*
Hydrous Alum Silicates	1332-58-7	1 - 5	*
Calcined flint clay	66402-68-4	1 - 5	*
Ammonium hydroxide	1336-21-6	0.1 - 1	*
Benzisothiazolinone	2634-33-5	0.1 - 1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician. May cause an allergic skin reaction.

Inhalation Remove to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
Product is or contains a sensitizer. May cause sensitization by skin contact.

Uniform Fire Code Sensitizer: Solid

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Environmental Precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection equipment. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Petroleum distillates, hydrotreated light 64742-47-8	TWA: 5 mg/m^3 STEL: 10 mg/m^3 (as oil mist)	TWA: 5 mg/m^3 (as oil mist)	
Hydrous Alum Silicates 1332-58-7	TWA: 2 mg/m^3 particulate matter containing no asbestos and <1% crystalline silica, respirable fraction	TWA: 15 mg/m^3 total dust TWA: 5 mg/m^3 respirable fraction (vacated) TWA: 10 mg/m^3 total dust (vacated) TWA: 5 mg/m^3 respirable fraction	TWA: 10 mg/m^3 total dust TWA: 5 mg/m^3 respirable dust
Calcined flint clay 66402-68-4	STEL: 10 mg/m^3 Zr TWA: 5 mg/m^3 Zr TWA: 0.02 mg/m^3 Mn TWA: 0.1 mg/m^3 Mn	TWA: 5 mg/m^3 Zr (vacated) TWA: 5 mg/m^3 Zr (vacated) STEL: 10 mg/m^3 Zr	IDLH: 25 mg/m^3 Zr TWA: 5 mg/m^3 except Zirconium tetrachloride Zr STEL: 10 mg/m^3 Zr

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Solid Gel Consistency Solid		
Appearance	Green	**Odor**	Earthy
Color	No information available	**Odor Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	8.25	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	250 C / 482 F	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Dispersible	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
None known based on information supplied.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information.
.

Inhalation Specific test data for the substance or mixture is not available.

Eye Contact Specific test data for the substance or mixture is not available.

Skin Contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated light 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
Ammonium hydroxide 1336-21-6	= 350 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms Itching. Rashes. Hives.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization of susceptible persons. May cause sensitization by skin contact. May cause sensitization by inhalation.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity No known effect based on information supplied. Carcinogenic potential is unknown.

Target Organ Effects Skin. Respiratory system.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document
Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Petroleum distillates, hydrotreated light 64742-47-8		96h LC50: = 2.2 mg/L (Lepomis macrochirus) 96h LC50: = 2.4 mg/L (Oncorhynchus mykiss) 96h LC50: = 45 mg/L (Pimephales promelas)		96h LC50: = 4720 mg/L
Ammonium hydroxide 1336-21-6		96h LC50: = 8.2 mg/L (Pimephales promelas)		48h EC50: = 0.66 mg/L

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Chemical Name	Log Pow
Benzisothiazolinone 2634-33-5	1.3

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

California Hazardous Waste Codes 133

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Calcined flint clay 66402-68-4	Toxic soluble Toxic
Ammonium hydroxide 1336-21-6	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT NOT REGULATED NOT REGULATED
Proper Shipping Name NON REGULATED
Hazard Class N/A

TDG Not regulated
Marine Pollutant This product contains a chemical which is listed as a severe marine pollutant according to TDG.

MEX Not regulated

ICAO Not regulated

IATA Not regulated
Proper Shipping Name NON REGULATED
Hazard Class N/A

IMDG/IMO Not regulated
Hazard Class N/A

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Calcined flint clay - 66402-68-4	66402-68-4	1 - 5	0.1
Ammonium hydroxide - 1336-21-6	1336-21-6	0.1 - 1	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Calcined flint clay 66402-68-4		X		
Ammonium hydroxide 1336-21-6	1000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Ammonium hydroxide 1336-21-6	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Calcined flint clay 66402-68-4			X	X	
Morpholine 110-91-8	X	X	X		
Ammonium hydroxide 1336-21-6	X	X	X	X	

International Regulations

Mexico
National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Hydrous Alum Silicates 1332-58-7 (1 - 5)		Mexico: TWA 10 mg/m^3 Mexico: STEL 20 mg/m^3
Calcined flint clay 66402-68-4 (1 - 5)		Mexico: TWA 5 mg/m^3 Mexico: TWA 0.2 mg/m^3 Mexico: STEL 10 mg/m^3

Mexico - Occupational Exposure Limits - Carcinogens

Canada
WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION

NFPA	**Health Hazards**	2	**Flammability**	0	**Instability**	0	**Physical and Chemical Hazards** -
HMIS	**Health Hazards**	2	**Flammability**	0	**Physical Hazard**	0	**Personal Protection** X

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 02-Dec-2011
Revision Date 10-Nov-2014
Revision Note No information available

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET: UNISOL PLUS

Section I - General Information

(000000-000000- - 0936)

Date of Issue:
8/31/2007 12:00:00 AM

Supercedes:
8/29/2007 12:00:00 AM

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
UNISOL PLUS

Chemical Family:
Chlorinated hydrocarbon

Formula is a mixture: [√]

Manufacturer Name:
CHEMSEARCH DIV. OF NCH CORP.

Manufacturer Address:
BOX 152170
IRVING, TX 75015

Prepared By:
M MCDOWELL/CHEMIST

Product Code Number:
0936

Emergency Phone Number:
800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
TETRACHLOROETHYLENE	CARC/IRR	25 ppm 1	100 ppm 2	100 ppm 1	127-18-4
CARBON TETRACHLORIDE	CARC/IRR	5 ppm 1	10 ppm 2	10 ppm 1	56-23-5
METHYLENE CHLORIDE	CARC/IRR	50 ppm 1	25 ppm 2	125 ppm 1	75-09-2
PROPYLENE OXIDE	$	2 ppm 1	100 ppm 2	N/E	75-56-9
$ CARC/SENS/IRR					

Section III - Physical Data

Boiling Point (°F): 208
Vapor Pressure (mm Hg): 63.2
Vapor Density (Air=1): 3.2
pH @ 100% : N/A
% Volatile by Volume: 100
H_2O Solubility: Negligible

Specific Gravity (H_2O=1): 1.58
Color: Colorless
Odor: Ether
Clarity: Transparent
Evaporation Rate (BuAc=1): 5.2
Viscosity: Non-viscous

Section IV - Fire and Explosion Hazard

Flash Point: Non-flam
Flammable Limits: Methylene Chloride
LEL: 13%

Method Used: T.C.C.
UEL: 19%
Aerosol Level (NFPA 30B): N/A

Extinguishing Media:

[√] Foam	[√] Alcohol Foam	[√] CO2
[√] Dry Chemical	[√] Water Spray	[ ] Other

NFPA 704 Hazard Rating:

4-Extreme
3-High
2-Moderate
1-Slight
0-Insignificant

Health: 2
Flammability: 1
Instability: 0
Special:

Special Fire Fighting Procedures:
Firefighters should wear a self-contained breathing apparatus and full protective gear. Extinguishing media should be chosen based on the nature of the surrounding fire. Cool fire-exposed containers with water spray to prevent bursting.

Unusual Fire and Explosion Hazards:
Vapors are heavier than air and may travel to distant and/or low-lying sources of ignition and flashback. The use of water spray (fog), while effective, may cause frothing and foaming. Never use a water jet as this will just spread the fire.Use care as spills may be slippery.

Section V - Health and Hazard Data

Threshold Limit Value:
Not Established for Mixture. See Section II.

Effects of Overexposure:

Acute: (Short Term Exposure)
EYE CONTACT: Causes severe irritation seen as stinging, tearing, redness, and a burning sensation.
SKIN CONTACT: Causes irritation seen as itching and redness. Prolonged or repeated contact may cause dryness, flaking, and burns. May cause allergic skin reactions seen as delayed skin rash which may be followed by blistering, scaling, and other skin effects. Product may be absorbed through the skin in harmful amounts.
INHALATION: May cause respiratory irritation seen as coughing and sneezing. Inhalation may cause central nervous system effects such as headache, dizziness, drowsiness, weakness, unconciousness, possible anesthetic effects from central nervous system depression, and may be fatal. A single brief exposure to levels above 6000 ppm may be immediately fatal. Excessive exposure may potentially increase sensitivity to epinephrine and increase myocardial irritability. Excessive exposure may cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen. Initial symptoms are characterized by vomiting, headache, blurring of vision, ataxia, weakness, dizziness, stupor, rapid heartbeat, syncope, dyspnea, respiratory distress, and death due to anoxia. This can be additive to the increase caused by smoking and other carbon monoxide sources. Alcohol consumed before or after exposure may increase adverse effects.
INGESTION: Causes irritation with possible nausea, vomiting, and diarrhea. May cause central nervous system effects similar to inhalation. Ingestion and subsequent vomiting of this product can lead to aspiration of the product into the lungs which can cause damage and may be fatal.

Chronic: (Long Term Exposure)
May cause skin sensitization in some individuals. Exposure may result in cardiac sensitization and increase the risk of cardiac arrest. May cause kidney or liver damage. On rare occasions, prolonged and repeated exposure to hydrocarbon mist poses a risk of chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and coughing are the most common symptoms. Aspiration may lead to pulmonary edema and hemorrhage and may be fatal. Signs of lung involvement include increased respiration and heart rates as well as a bluish discoloration of the skin.
Chronic skin contact may promote dermatitis and oil acne. In rarer cases, an increased senstivity to sunlight (photosensitivity) may occur.
Medical conditions aggravated by exposure: pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis; pre-existing liver and kidney diseases; and rhythm disorders of the heart. Carboxyhemoglobinemia may aggravate any pre-existing condition sensitive to a decrease in available oxygen, such as chronic lung diseases, coronary artery diseases, or anemias.
Target organs: liver, kidneys, heart, blood-forming organs, and central nervous system. The primary routes of exposure are skin and eye contact.

Primary Routes of Entry

[√] Inhalation [√] Ingestion [√] Absorption

Emergency First Aid Procedures:

Inhalation:
Remove from the area to fresh air. If not breathing, clear the airway and start mouth to mouth artificial respiration. Get immediate medical attention.

Eye Contact:
Immediately rinse the eyes with water. Remove any contact lenses and continue flushing for at least 15 minutes. Hold the eyelids apart to ensure rinsing of the entire surface of the eyes and lids with water. Get immediate medical attention.

Skin Contact:
Immediately remove contaminated clothing and shoes. Flush affected areas with large amounts of water for 20 to 30 minutes. Get immediate medical attention. Discard clothing and shoes.

Ingestion:
Give 3 to 4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

Notes to Physician:
Chlorinated Hydrocarbons may sensitize the heart to Epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators. Ingestion and subsequent vomiting of this product can lead to aspiration of the product into the lungs which can cause damage and may be fatal. Depending on the amount ingested and retained as well as the toxicity of the product, gastric lavage should be considered. Keep patient's head below hips to prevent pulmonary aspiration. If comatose, a cuffed endotracheal tube will prevent aspiration.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

[√] IARC [√] NTP [√] OSHA [√] ACGIH [√] Other

VOC content: 0.6% by weight; 9.6 g/L

TETRACHLOROETHYLENE
IHL-RAT LC_{50}: 34,200 mg/m3/8h 3.
ORL-RAT LD_{50}: 2629 mg/kg 3.
SKN-RBT LD_{50}: >3228 mg/kg 3.
SKN-RBT SDT: 500 mg/24h mild 3.
EYE-RBT SDT: 500 mg/24h mild 3.
EYE-RBT: severe 4.

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans
IARC group 2A
NTP: Part B. Reasonably anticipated to be human carcinogen.

CARBON TETRACHLORIDE
ORL-RAT LD_{50}: 2350 mg/kg 4.
IHL-RAT LC_{50}: 8000 ppm 4.
SKN-RAT LD_{50}: 5070 mg/kg 4.

ACGIH: A2 - Suspected human carcinogen.
IARC group 2B
NTP: Part B. Reasonably anticipated to be human carcinogen.

METHYLENE CHLORIDE
ORL-HMN LDL_{o}: 357 mg/kg 3.
ORL-RAT LD_{50}: 1600 mg/kg 3.
SKN-RBT SDT: 800 mg/24h severe 3.
EYE-RBT SDT: 162 mg moderate 3.
IHL-RAT LC_{50}: 52 g/m3 3.
IHL-HMN TCL_{o}: 500 ppm/8h 3.

Tumorigenic data
IHL-RAT TCL_{o}: 3500 PPM/6H/2Y-I 3.

Reproductive data
IHL-RAT TCL_{o}: 4500 ppm/24h/female 1-17 days after conception 3.

Methylene Chloride has been evaluated for possible cancer causing effects in laboratory animals. Inhalation studies at concentrations of 2000 and 4000 ppm increased the incidence of malignant liver and lung tumors in mice. Three inhalation studies of rats have shown increased incidence of benign mammary gland tumors in female rats at concentrations of 500 ppm and above and increases in benign mammary gland tumors in males at concentrations of 1500 ppm and above. Rats exposed to 50 and 200 ppm via inhalation showed no increased incidence of tumors. Mice and rats exposed by ingestion at levels up to 250 mg/kg/day lifetime and hamsters exposed via inhalation to concentrations up to 3500 ppm lifetime did not show an increased incidence of tumors. 4.

Epidemiology studies of 751 humans chronically exposed to Methylene Chloride in the workplace of which 252 were exposed for a minimum of 20 years did not demonstrate any increase in deaths caused by cancer or cardiac problems. A second study of 2227 workers confirmed these results. 4.

Laboratory animal studies on mice, rats, and rabbits have been conducted to evaluate the potential reproductive and developmental effects of Methylene Chloride exposures. Methlyene Chloride exposure has not been shown to cause teratogenic effects (birth defects) in experimental animals. 4.

ACGIH group A3: confirmed animal carcinogen with unknown relevance to humans
IARC group 2B: animal sufficient evidence; human inadequate evidence
NTP: reasonably anticipated to be a human carcinogen

PROPYLENE OXIDE
ORL-RAT LD_{50}: 380 mg/kg 4.
IHL-RAT LC_{50}: 4000 ppm/4h 4.
SKN-RBT LD_{50}: 1500 uL/kg 4.
SKN-RBT SDT: 50 mg/6m severe 4.
EYE-RBT SDT: 20 mg/24h moderate 4.

ACGIH group A3: confirmed animal carcinogen with unknown relevance to humans
IARC group 2B: animal sufficient evidence; human inadequate evidence
NTP: reasonably anticipated to be a human carcinogen

Section VII - Reactivity Data

Stability

[√] Stable [ ] Unstable

Conditions to Avoid:
Direct sunlight and other ultraviolet sources. Avoid heat, hotsurfaces, sparks, and open flames.

Hazardous Polymerization

[√] Will not occur [ ] May occur

Conditions to Avoid:
N/A

Incompatibility (Materials to Avoid):
Strong oxidizing agents such as Chlorine bleach, Hydrogen Peroxide, Permanganates, and Chromates. Acids and Bases; metals such as Zinc powders, Zinc, Aluminum powders, Magnesium powders, Potassium, Barium, and Sodium; Amines, Oxygen, water, Methanol, aromatic hydrocarbons, 1,1,1-Trichloroethane. Forms an explosive mixture with Nitric Acid.

Hazardous Decomposition Products:
Oxides of Carbon, Hydrogen Chloride, Chlorine, Phosgene, May react with freshly galvanized surfaces to produce highly toxic Dichloroacetylene.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:
Wear appropriate protective clothing. Eliminate all sources of ignition and ventilate the area. Use only non-sparking equipment. Use care as spills may be slippery. Shut off source of leak. Dike and contain spill. Absorb with an inert material and transfer all material into a properly labeled container for disposal. Prevent product from contaminating soil or from entering sewage and drainage systems and bodies of water. Flush area with water.

Waste Disposal Method(s):
Dispose of in accordance with all Federal, state, and local regulations.

Neutralizing Agent:
N/A

Section IX - Special Protection Information

Required Ventilation:
Local ventilation is recommended to control exposure from operations that can generate excessive levels of mists or vapors. Local ventilation is preferred, because it prevents dispersion into work areas by controlling it at its source.

Respiratory Protection:
Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in publication No. 87-116 or ANSI Z88.2-1992.

Glove Protection:
Viton or Polyvinyl Alcohol gloves should be worn. Ensure compliance with OSHA's personal protective equipment (PPE) standard for hand protection, 29 CFR 1910.138.

Eye Protection:
Chemical goggles should be worn when handling. Ensure compliance with OSHA's Personal Protective Equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

Other Protection:
Wear protective clothing when handling. Remove soaked clothing and shoes. A safety shower and an eyewash station should be available. Wash clothing and clean shoes before re-use.

Section X - Storage and Handling Information

Storage Temperature

Max: 120°F Min: 35°F

Storage Conditions

[√] Indoors [ ] Outdoors [ ] Heated [ ] Refrigerated

Precautions to be Taken in Handling and Storing:
Always store material in its original container. Keep the container tightly closed when not in use. Do not store in aluminum, aluminum alloys, plastics,or zinc. Use with caution around heat, sparks, pilot lights, static electricity, and open flame. Empty containers may contain product residues which may exhibit the hazards of the product. To avoid possible explosion, do not pressurize, cut, weld, solder, drill, grind, or expose empty containers to heat, hot surfaces, sparks, or open flames. Ground and bond container when handling near flammable vapors and all sources of ignition.

Other Precautions:
Keep out of reach of children. Read the entire label before using the product. Follow the label directions.

Section XI - Regulatory Information

Chemical Name	CAS Number	Upper % Limit
TETRACHLOROETHYLENE	127-18-4	85
CARBON TETRACHLORIDE	56-23-5	1
METHYLENE CHLORIDE	75-09-2	15
PROPYLENE OXIDE	75-56-9	1

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

1. Threshold Limit Values for chemical substances and physical agents and biological exposure indices, ACGIH, 2007.
2. OSHA PEL.
3. Vendor's MSDS.
4. Registry of toxic effects of chemical substances, CCINFOWeb, 2007.

5. European Chemical Substances Information System (ESIS), International Uniform Chemical Information Database (IUCLID) Chemical Data Sheets.
All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA inventory or otherwise exempted from listing.

IRR: Irritant, OSHA: Occupational Safety & Health Administration, IARC: International Agency for the Research on Cancer, TOX: Toxic, NFPA: National Fire Protection Association, ppm: Parts Per Million, UEL: Upper Explosion Limit, STEL: Short-term Exposure Limit, SKN: Skin, IHL: Inhalation, COMB: Combustible, CORR: Corrosive, MUT: Mutagenic, CARC: Carcinogenic, N/A: Not Applicable, TLV: Threshold Limit Value, N/E: Not Established, ORL: Oral, FLAM: Flammable, ASPHYX: Asphyxiant, C.O.C.: Cleveland Open Cup, PNOR: Particles Not Otherwise Regulated, LEL: Lower Explosion Limit, mg/L: Milligrams per Liter, PNOS: Particles Not Otherwise Specified, g/L: Grams per Liter, PMCC: Pensky-Martin Closed Cup, NTP: National Toxicology Program, µg/L: Micrograms per Liter, TCC: Tagliabue Closed Cup, SEV: Severe, RBT: Rabbit, INV: Intravenous, ACGIH: American Conference of Governmental Industrial Hygienists, PEL: Permissible Exposure Limit, MOD: Moderate, IPT: Intraperitoneal, gm/kg: Grams per Kilogram, C.C.C.: Cleveland Closed Cup, HMN: Human, mg/m3: Milligrams per Cubic Meter, mg/kg: Milligrams per Kilogram, VOC: Volatile Organic Compound, SDT: Standard Draize Test, MSE: Mouse, GPG: Guinea Pig.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.

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SAFETY DATA SHEET

Issuing Date 15-Aug-2014 **Revision Date** 15-Aug-2014 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **Asidufoam® Foaming Bathroom Cleaner**

Other means of identification

Product Code(s) **33732, 33701, 33705, 33755**

UN-Number UN1760

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Bathroom cleaner

Uses advised against No information available

Supplier's details

Supplier Address
ITW PRO BRANDS
805 E. Old 56 Highway
Olathe, KS 66061
TEL: 1-800-443-9536

Emergency telephone number

Emergency Telephone Number 800-535-5053 Infotrac

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Danger**

Hazard Statements

• Causes severe skin burns and eye damage

Appearance Yellow **Physical State** Liquid. **Odor** Pine

Precautionary Statements

Prevention

• Do not breathe dust/fume/gas/mist/vapors/spray.
• Wash face, hands and any exposed skin thoroughly after handling.
• Wear protective gloves/protective clothing/eye protection/face protection.

General Advice

• Immediately call a POISON CENTER or doctor/physician.
• Specific treatment (see supplemental first aid instructions on this label)

Eyes

• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
• Immediately call a POISON CENTER or doctor/physician.

Skin

• IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
• Wash contaminated clothing before reuse.

Inhalation

• IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

• IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Fire

• None

Spills and Leaks

• None

Storage

• Store locked up.

Disposal

• Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

Toxic to aquatic life. Harmful to aquatic life with long lasting effects

1.5% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Cocamidopropyl betaine	61789-40-0	3 -7	*
Diethylene glycol monobutyl ether	112-34-5	1-5	*
Citric acid	77-92-9	1-5	*
Sulfamic acid	5329-14-6	1-5	*
2-Butoxyethanol	111-76-2	1-5	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

General Advice Immediate medical attention is required.

Eye Contact Keep eye wide open while rinsing. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Immediate medical attention is required.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician or Poison Control Center immediately.

Protection of First-aiders Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. High risk of slipping due to leakage/spillage of product.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Avoid release to the environment. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Small spillage: Wipe up with absorbent material (e.g. cloth, fleece) Large spillage: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean any slippery coating that remains using a detergent/soap solution or another biodegradable cleaner.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Ensure adequate ventilation. Do not take internally. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep container closed when not in use. Keep out of the reach of children. Do not contaminate food or feed stuffs.

Incompatible Products Strong oxidizing agents. Strong reducing agents. Alkalis. Reactive metals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m^3 (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m^3 (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m^3

Immediately Dangerous to Life or Health. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH:

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection	Tightly fitting safety goggles.
Skin and Body Protection	Impervious gloves. Impervious clothing.
Respiratory Protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.
Hygiene Measures	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	**Appearance**	Yellow
Odor	Pine	**Odor Threshold**	No information available

Property	Values	Remarks/ - Method
pH	1.3	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	100 °C / 212 °F	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	> 1 (air = 1)	None known
Specific Gravity	1.011 @ 70°F	None known
Water Solubility	Completely soluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	2.5 cps	None known

Flammable Properties	Not flammable
Explosive Properties	No data available
Oxidizing Properties	No data available

Other information

VOC Content (%)	1.00%

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Incompatible products.

Incompatible materials

Strong oxidizing agents. Strong reducing agents. Alkalis. Reactive metals.

Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO_2). Sulfur oxides. Ammonia.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation May cause irritation of respiratory tract.

Eye Contact Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness.

Skin Contact Corrosive. Causes severe skin burns.

Ingestion May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cocamidopropyl betaine	= 4900 mg/kg (Rat)	-	-
Diethylene glycol monobutyl ether	= 3384 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	-
Citric acid	3000 mg/kg (Rat)	-	-
Sulfamic acid	= 1450 mg/kg (Rat)	-	-
2-Butoxyethanol	= 470 mg/kg (Rat)	220 mg/kg (Rabbit) 2270 mg/kg (Rat)	= 2.21 mg/L (Rat) 4 h = 450 ppm (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol	A3	Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 3: Not Classifiable as to its Carcinogenicity to Humans

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity Avoid repeated exposure. Possible risks of irreversible effects. Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. May cause adverse liver effects. May cause adverse effects on the bone marrow and blood-forming system.

Target Organ Effects Liver. Kidney. Respiratory system. Eyes. Skin. Central nervous system (CNS). Blood. Hematopoietic system.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product

Acute Toxicity 1.5% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 19758 mg/kg; Acute toxicity estimate

LD50 Dermal 60612 mg/kg; Acute toxicity estimate

Inhalation

dust/mist 150 mg/L; Acute toxicity estimate

Vapor 1100 mg/L; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Cocamidopropyl betaine 61789-40-0	EC50 72 h: 1.0 - 10.0 mg/L (Desmodesmus subspicatus) EC50 96 h: = 0.55 mg/L (Desmodesmus subspicatus)	LC50 96 h: 1.0-10.0 mg/L (Brachydanio rerio) LC50 96 h: = 2 mg/L semi-static (Brachydanio rerio)		EC50 48 h: = 6.5 mg/L (Daphnia magna)
Diethylene glycol monobutyl ether 112-34-5	EC50 96 h: > 100 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 1300 mg/L static (Lepomis macrochirus)		EC50 24 h: = 2850 mg/L (Daphnia magna) EC50 48 h: > 100 mg/L (Daphnia magna)
Citric acid 77-92-9		LC50 96 h: = 1516 mg/L static (Lepomis macrochirus)		EC50 72 h: = 120 mg/L (Daphnia magna)
Sulfamic acid 5329-14-6		LC50 96 h: = 14.2 mg/L static (Pimephales promelas)		
2-Butoxyethanol 111-76-2		LC50 96 h: = 1490 mg/L static (Lepomis macrochirus) LC50 96 h: = 2950 mg/L (Lepomis macrochirus)		EC50 24 h: 1698 - 1940 mg/L (Daphnia magna) EC50 48 h: > 1000 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation

Chemical Name	Log Pow
Citric acid	-1.72
2-Butoxyethanol	0.81

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

US EPA Waste Number D002

California Hazardous Waste Codes 791

14. TRANSPORT INFORMATION

DOT

UN-Number UN1760

Proper shipping name Corrosive liquid, n.o.s.

Hazard Class 8

Packing Group III

Description UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III

Emergency Response Guide Number 154

TDG

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III

MEX

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III

ICAO

UN-Number	UN1760
Proper shipping name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III

IATA

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
ERG Code	8L
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III

IMDG/IMO

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
EmS No.	F-A, S-B
Marine Pollutant	Product is a marine pollutant according to the criteria set by IMDG/IMO
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III

RID

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
Classification Code	C9
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III

ADR

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
Classification Code	C9
Tunnel Restriction Code	(E)
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III, (E)

ADN

Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
Classification Code	C9
Special Provisions	274
Description	UN1760, Corrosive liquid, n.o.s. (Sulfamic acid, Citric acid), 8, III
Limited Quantity	5 L

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Citric acid	-	-	RQ Section number 180.950

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Diethylene glycol monobutyl ether	X		X	X	
Sulfamic acid	X				
2-Butoxyethanol	X	X	X	X	X
Isobutyl acetate	X	X	X		X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard** 3	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 3	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501
Issuing Date 15-Aug-2014
Revision Date 15-Aug-2014

Revision Note Initial Release.

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

Dept. 113, 122, 132

Master

valspar

if it matters, we're on it®

Material Safety Data Sheet

EDI# 28200251

MSDS - 753

PAINT

AEROSOL CANS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product ID:	**AAG1000.076**
Product Name:	PAD MOUNT GREEN TOPCOAT 12UC
Product Use:	Paint product.
Print date:	10/Nov/2011
Revision Date:	10/Nov/2011

Company Identification
The Valspar Corporation
1000 Lake Road
Medina, OH 44256

Manufacturer's Phone:	1-330-725-4511
24-Hour Medical Emergency Phone:	1-888-345-5732

ReQ. 46833

P.O. # ~~46833~~ 104360

4/19/12

2. HAZARDS IDENTIFICATION

Primary Routes of Exposure:
Inhalation
Ingestion
Skin absorption

Eye Contact:

- Severe eye irritation
- Risk of serious damage to eyes.

Skin Contact:

- May cause defatting of the skin.
- Dermatitis
- Harmful if absorbed through skin.

Ingestion:

- Irritation of the mouth, throat, and stomach.
- Aspiration hazard if swallowed - can enter lungs and cause damage.

Inhalation:

- Causes respiratory tract irritation.
- Harmful by inhalation.
- Asphyxia
- May cause damage to nasal and respiratory passages.

Acute Other Health Effects:
- Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
- May cause frostbite

Target Organ and Other Health Effects:
- Cardiac arrhythmias
- Causes headache, drowsiness or other effects to the central nervous system.
- Liver injury may occur.
- Hearing loss.
- Blood disorders
- Kidney injury may occur.

This product contains ingredients that may contribute to the following potential chronic health effects:
- Notice: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Carcinogens:
- Possible cancer hazard. Contains material which may cause cancer based on animal data.

3. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Ingredient Name CAS-No.	Approx. Weight %	Chemical Name
DIMETHYL KETONE-EXEMPT SOLVENT 67-64-1	30 - 35	Acetone
BUTYL ACETATE 123-86-4	15 - 20	n-Butyl acetate
PROPANE 74-98-6	10 - 15	Propane
BUTANE 106-97-8	5 - 10	Butane
PROPYLENEGLYCOL MONOMETHYL ETHER ACETATE 108-65-6	1 - 5	2-methoxy-1-methylethyl acetate
TITANIUM DIOXIDE 13463-67-7	1 - 5	Titanium dioxide
N-BUTYL ALCOHOL 71-36-3	1 - 5	n-Butyl alcohol
C.I. PIGMENT BLACK 7 1333-86-4	.1 - 1	Carbon black

If this section is blank there are no hazardous components per OSHA guidelines.

4. FIRST AID MEASURES

4. FIRST AID MEASURES

Eye Contact:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. If medical assistance is not immediately available, flush an additional 15 minutes. Get medical attention immediately.

Skin Contact:
Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention, if symptoms develop or persist.

Ingestion:
Rinse mouth with water. Give one or two glasses of water. Only induce vomiting at the instruction of medical personnel. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration. Get medical attention immediately.

Inhalation:
Move injured person into fresh air and keep person calm under observation. Get medical attention immediately. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration. Do not give direct mouth-to-mouth resuscitation if inhaled. To protect rescuer, use air-viva, oxy-viva or one-way mask. Resuscitate in a well-ventilated area.

Medical conditions aggravated by exposure:
Any respiratory or skin condition.

5. FIRE FIGHTING MEASURES

Flash point (Fahrenheit):	-76
Flash point (Celsius):	-60
Lower explosive limit (%):	1
Upper explosive limit (%):	13
Autoignition temperature:	not determined
Sensitivity to impact:	no
Sensitivity to static discharge:	Subject to static discharge hazards. Please see bonding and grounding information in Section 7.
Hazardous combustion products:	See Section 10.

Unusual fire and explosion hazards:
Contaminated rags, wipes, saw dust, etc., may catch fire spontaneously. Store waste under water in closed metal containers or in approved self-closing containers designed to prevent spontaneous combustion until disposed of in compliance with applicable regulations. Oxidizing Material

Extinguishing media:
Carbon dioxide, dry chemical, foam and/or water fog.

Fire fighting procedures:
Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Keep containers and surroundings cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Action to be taken if material is released or spilled:
Ventilate the area. Avoid breathing dust or vapor. Use self-containing breathing apparatus or airmask for large spills in a confined area. Wipe, scrape or soak up in an inert material and put in a container for disposal. See section 7, "Handling and Storage", for proper container and storage procedures. Remove all sources of ignition. Soak up with inert absorbent material. Use only non-sparking tools. Avoid contact with eyes.

7. HANDLING AND STORAGE

7. HANDLING AND STORAGE

Precautions to be taken in handling and storage:
Keep away from heat, sparks and open flame. - No smoking. Keep container closed when not in use. Do not store above 120 degrees F. (49 degrees C). Based on flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106, Ontario OH&S regulation 851 section 22. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS

Personal Protective Equipment

Eye and face protection:
Wear chemical goggles with splash shields or face shield. Contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury in case of exposure.

Skin protection:
Appropriate chemical resistant gloves should be worn.

Other Personal Protection Data:
Ensure that eyewash stations and safety showers are close to the workstation location. To prevent skin contact wear protective clothing covering all exposed areas.

Respiratory protection:
If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

Ventilation
Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Ovens used for curing should contain a fresh air purge to prevent vapours from accumulating and creating a possible explosive mixture. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.

Exposure Guidelines

OSHA Permissible Exposure Limits (PEL's)

Ingredient Name CAS-No.	Approx. Weight %	TWA (final)	Ceilings limits (final)	Skin designations
DIMETHYL KETONE-EXEMPT SOLVENT 67-64-1	30 - 35	1000 ppm TWA 2400 mg/m^3 TWA		
BUTYL ACETATE 123-86-4	15 - 20	150 ppm TWA 710 mg/m^3 TWA		
PROPANE 74-98-6	10 - 15	1000 ppm TWA 1800 mg/m^3 TWA		
TITANIUM DIOXIDE 13463-67-7	1 - 5	15 mg/m^3 TWA dust total		
N-BUTYL ALCOHOL 71-36-3	1 - 5	100 ppm TWA 300 mg/m^3 TWA		
C.I. PIGMENT BLACK 7 1333-86-4	.1 - 1	3.5 mg/m^3 TWA		

ACGIH Threshold Limit Value (TLV's)

Ingredient Name CAS-No.	Approx. Weight %	TWA	STEL	Ceiling limits	Skin designations
DIMETHYL KETONE-EXEMPT SOLVENT 67-64-1	30 - 35	500 ppm TWA	750 ppm STEL		
BUTYL ACETATE 123-86-4	15 - 20	150 ppm TWA	200 ppm STEL		
PROPANE 74-98-6	10 - 15	1000 ppm TWA			
BUTANE 106-97-8	5 - 10	1000 ppm TWA			
TITANIUM DIOXIDE 13463-67-7	1 - 5	10 mg/m^3 TWA			
N-BUTYL ALCOHOL 71-36-3	1 - 5	20 ppm TWA			
C.I. PIGMENT BLACK 7 1333-86-4	.1 - 1	3.5 mg/m^3 TWA			

9. PHYSICAL PROPERTIES

Odor:	Normal for this product type.
Physical State:	Aerosol
pH:	not determined
Vapor pressure:	NOT DETERMINED mmHg @ 68°F (20°C)
Vapor density (air = 1.0):	4.6
Boiling point:	not determined
Solubility in water:	not determined
Coefficient of water/oil distribution:	not determined
Density (lbs per US gallon):	6.76
Specific Gravity:	.81
Evaporation rate (butyl acetate = 1.0):	5.6
Flash point (Fahrenheit):	-76
Flash point (Celsius):	-60
Lower explosive limit (%):	1
Upper explosive limit (%):	13
Autoignition temperature:	not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat.
Incompatibility:	Strong oxidizing agents
Hazardous Polymerization:	None anticipated.
Hazardous Decomposition Products:	Carbon monoxide and carbon dioxide. Metal oxide fumes.
Sensitivity to static discharge:	Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

11. TOXICOLOGICAL INFORMATION

Ingredient Name CAS-No.	Approx. Weight %	NIOSH - Selected LD50s and LC50s

11. TOXICOLOGICAL INFORMATION

DIMETHYL KETONE-EXEMPT SOLVENT 67-64-1	30 - 35	= 5800 mg/kg Oral LD50 Rat
BUTYL ACETATE 123-86-4	15 - 20	= 10768 mg/kg Oral LD50 Rat = 390 ppm Inhalation LC50 Rat 4 h > 17600 mg/kg Dermal LD50 Rabbit
PROPANE 74-98-6	10 - 15	= 658 mg/L Inhalation LC50 Rat 4 h
BUTANE 106-97-8	5 - 10	= 658 mg/L Inhalation LC50 Rat 4 h
PROPYLENEGLYCOL MONOMETHYL ETHER ACETATE 108-65-6	1 - 5	= 8532 mg/kg Oral LD50 Rat > 5000 mg/kg Dermal LD50 Rabbit
TITANIUM DIOXIDE 13463-67-7	1 - 5	> 10000 mg/kg Oral LD50 Rat
N-BUTYL ALCOHOL 71-36-3	1 - 5	= 3400 mg/kg Dermal LD50 Rabbit = 790 mg/kg Oral LD50 Rat = 8000 ppm Inhalation LC50 Rat 4 h > 17.7 mg/L Inhalation LC50 Rat 4 h
C.I. PIGMENT BLACK 7 1333-86-4	.1 - 1	> 15400 mg/kg Oral LD50 Rat > 3 g/kg Dermal LD50 Rabbit

Mutagens/Teratogens/Carcinogens:

Possible cancer hazard. Contains material which may cause cancer based on animal data.

IARC has classified carbon black as possibly carcinogenic to humans (Group 2B). Contains TIO2 which is listed by IARC as a possible human carcinogen (Group 2B) based on animal data. Neither long term animal studies, nor human epidemiology studies of workers exposed to TIO2 provide an adequate basis to conclude TIO2 is carcinogenic. TIO2 is not classified as a carcinogen by NTP, U.S. OSHA, or the U.S. EPA.

Ingredient Name CAS-No.	Approx. Weight %	IARC Group 1 - Human Evidence	IARC Group 2A - Limited Human Data	IARC Group 2B - Sufficient Animal Data
TITANIUM DIOXIDE 13463-67-7	1 - 5			Monograph 47 [1989]
C.I. PIGMENT BLACK 7 1333-86-4	.1 - 1			Monograph 65 [1996]

Ingredient Name CAS-No.	Approx. Weight %	NTP Known Carcinogens	NTP Suspect Carcinogens	NTP Evidence of Carcinogenicity
TITANIUM DIOXIDE 13463-67-7	1 - 5			male rat-negative; female rat-negative; male mice-negative; female mice-negative

Ingredient Name CAS-No.	Approx. Weight %	OSHA - Hazard Communication Carcinogens	OSHA - Specifically Regulated Carcinogens	ACGIH Carcinogens
TITANIUM DIOXIDE 13463-67-7	1 - 5	Present		
C.I. PIGMENT BLACK 7 1333-86-4	.1 - 1	Present		

12. ECOLOGICAL DATA

12. ECOLOGICAL DATA
No information on ecology is available.

13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation
UN ID Number (msds): CONCOM
Proper Shipping Name: CONSUMER COMMODITY ORM-D [Paint]

U.S Hazmat and/or International DG shipment exceptions
The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

Reportable Quantity Description:

International Air Transport Association (IATA):
UN ID Number (msds): UN1950
Proper Shipping Name: AEROSOLS, FLAMMABLE
Hazard Class: 2.1

International Maritime Organization (IMO):
IMO UN/ID Number (msds): UN1950
Proper Shipping Name: AEROSOLS, FLAMMABLE
Hazard Class: 2.1

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

Ingredient Name CAS-No.	Approx. Weight %	SARA 302	SARA 313	CERCLA RQ in lbs.
DIMETHYL KETONE-EXEMPT SOLVENT 67-64-1	30 - 35			5000
BUTYL ACETATE 123-86-4	15 - 20			5000
N-BUTYL ALCOHOL 71-36-3	1 - 5		form R reporting required for 1.0% de minimis concentration	5000

SARA 311/312 Hazard Class:
Acute: yes
Chronic: yes
Flammability: yes
Reactivity: no
Sudden Pressure: yes

U.S. STATE REGULATIONS:

Right to Know:
The specific chemical identity of a component may be withheld as a trade secret under 34 Pennsylvania Code, Chapter 317.

Pennsylvania Right To Know:

BUTANE	106-97-8
PROPYLENEGLYCOL MONOMETHYL ETHER ACETATE	108-65-6
BUTYL ACETATE	123-86-4
TITANIUM DIOXIDE	13463-67-7
DIMETHYL KETONE- EXEMPT SOLVENT	67-64-1
N-BUTYL ALCOHOL	71-36-3
PROPANE	74-98-6

Additional Non-Hazardous Materials

PROPRIETARY RESIN	Trade Secret

Rule 66 status of product Not photochemically reactive.

INTERNATIONAL REGULATIONS - Chemical Inventories

US TSCA Inventory:
All components of this product are in compliance with U.S. TSCA Chemical Substance Inventory Requirements.

Canada Domestic Substances List:
All components of this product are listed on the Domestic Substances List.

16. OTHER INFORMATION

HMIS Codes

Health:	2*
Flammability:	4
Reactivity:	1
PPE:	X - See Section 8 for Personal Protective Equipment (PPE).

Abbreviations:
OSHA - Occupational Safety and Health Administration, IARC - International Agency for Research on Cancer, NIOSH - National Institute of Occupational Safety and Health, NTP - National Toxicology Program, ACGIH - American Conference of Governmental Industrial Hygienists, SCAQMD - South Coast Air Quality Management District, TSCA - Toxic Substances Control Act, IATA - International Air Transport Association, IMO - International Maritime Organization, DOT - Department of Transportation, NA - Not applicable, NOT ESTAB - Not established, N.A.V. - Not available, RQ - Reportable quantity, WT - Weight, MG/CU M - Milligrams per cubic meter, G/L - Grams per liter, MM - Millimeters, MPPCF - Millions of particles per cubic foot, PPM - parts per million, PPT - parts per thousand, TCC/PM - Tag closed cup / Pensky-Martens, PB - Lead, PEL - Permissible exposure level, TWA - Time Weighted Average, STEL - Short term exposure limit, C - Celsius, F - Fahrenheit.

Disclaimer:
The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. VALSPAR WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option. This MSDS contains additional information required by the state of Pennsylvania.

Preparation Information:

Prepared By:	Regulatory Affairs Department
Print date:	10/Nov/2011
Revision Date:	10/Nov/2011

DRY CHEMICAL

SAFETY DATA SHEET
Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)

1. IDENTIFICATION

Product Name	Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)
Other Names	Multi-Purpose, Ammonium Phosphate, Monoammonium Phosphate
Recommended use of the chemical and restrictions on use	
Identified uses	Fire Extinguishing Agent
Restrictions on use	Consult applicable fire protection codes
Company Identification	Kidde Residential & Commercial 1016 Corporate Park Drive Mebane, NC 27302 USA
Customer Information Number	(919) 563-5911 (919) 304-8200
Emergency Telephone Number	
CHEMTREC Number	(800) 424-9300 (703) 527-3887 (International)
Issue Date	April 10, 2015
Supersedes Date	February 9, 2015

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200)and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

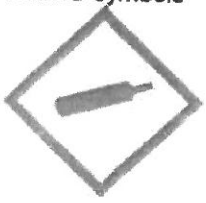
2. HAZARD IDENTIFICATION

This SDS covers the product listed above as sold in pressurized and non-pressurized containers. GHS classifications for both forms are listed below.

GHS Classification – Pressurized

Hazard Classification
Gas under pressure – Compressed gas

Label Elements
Hazard Symbols



Signal Word: Warning

Hazard Statements
Contents under pressure; may explode if heated.

2. HAZARD IDENTIFICATION

Precautionary Statements
Prevention
None
Response
None
Storage
Protect from sunlight.
Store in well-ventilated place.
Disposal
None

GHS Classification: Non - pressurized

Hazard Classification
This product is classified as not hazardous in accordance with the Globally Harmonized System of Classification and Labelling (GHS).

Label Elements
Hazard Symbols
None

Signal Word: None

Hazard Statements
None

Precautionary Statements
Prevention
None
Response
None
Storage
None
Disposal
None

Other Hazards
Mica may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of crystalline silica in humans.

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	< 10%
Acute dermal toxicity	< 10%
Acute inhalation toxicity	< 10%
Acute aquatic toxicity	< 10%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration
Monoammonium Phosphate	7722-76-1	55 - 65%
Ammonium Sulfate	471-34-1	30 - 40%
Mica	12001-26-2	< 5%
Clay	1332-58-7	< 5%
Amorphous Silica	7631-86-9	< 5%
Dye	NA	<1%

Note: Pressurized product uses nitrogen or compressed air as the expellant.

4. FIRST- AID MEASURES

Description of necessary first-aid measures

Eyes
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin
Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

Ingestion
Dilute by drinking large quantities of water and obtain medical attention.

Inhalation
Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media
This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Specific hazards arising from the chemical
Pressurized containers may explode in heat of fire.

Special Protective Actions for Fire-Fighters
Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

Environmental Precautions
Prevent large quantities of the material from entering drains or watercourses.

Methods and materials for containment and cleaning up
Sweep up or vacuum and transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective clothing. Prevent skin and eye contact.

Conditions for safe storage
Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized or plastic container. Store pressurized and plastic containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Mica
ACGIH TLV: 3 mg/m³ TWA, measured as respirable fraction of the aerosol.
OSHA PEL: 20 mppcf, <1% crystalline silica
Clay as Kaolin, Respirable Fraction
ACGIH TLV: 2 mg/m³ TWA
OSHA PEL: 15 mg/m³ TWA, total dust
5 mg/m³ TWA, respirable fraction
Nuisance Dust Limit
OSHA PEL: 50 mppcf or 15 mg/m³ TWA, total dust
15 mppcf or 5 mg/m³ TWA, respirable fraction

Appropriate engineering controls
Use with adequate ventilation. If this product is used in a pressurized system, there should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.

Individual protection measures
Respiratory Protection
Not normally required. Use dust mask where dustiness is prevalent, or TLV is exceeded. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Skin Protection
Gloves
Eye/Face Protection
Chemical goggles or safety glasses with side shields.
Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Non- Pressurized
Appearance

Physical State	Solid (powder)
Color	Pale Yellow
Odor	Odorless
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	No data available
Boiling Range/Point (°C/F)	Not applicable
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	No data available
Vapor Density (Air = 1)	Not applicable
VOC (g/l)	None
VOC (%)	None
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Auto-Ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	No data available
Lower explosive limit	No data available
Flammability (solid, gas)	No data available

Expellant - Nitrogen
Appearance

Physical State	Compressed gas
Color	Colorless
Odor	None
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	0.075 lb/ft³ @70°F as vapor
Boiling Range/Point (°C/F)	-196°C/-321 °F
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Density (Air = 1)	Not applicable
VOC (g/l)	None
VOC (%)	None
Partition coefficient (n-octanol/water)	No data available
Viscosity	Not applicable
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	Not explosive
Lower explosive limit	Not explosive
Flammability (solid, gas)	Not flammable

10. STABILITY AND REACTIVITY

Reactivity
Pressurized containers may rupture or explode if exposed to heat.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Exposure to direct sunlight - contact with incompatible materials

Incompatible Materials
Strong oxidizing agents - strong acids - sodium hypochlorite

Hazardous Decomposition Products
Oxides of carbon - ammonia - oxides of phosphorus - nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Monoammonium Phosphate:
Oral LD50 (Rat) 5750 mg/kg
Dermal LD50 (Rabbit) >5000mg/kg
Inhalation LC50 (Rat) 5.1mg/l
Ammonium Sulfate:
Oral LD50 (Rat) 4250 mg/kg
Dermal LD50 (Rabbit) >2000mg/kg
Mica:
Oral LD50 (Rat) >2000 mg/kg
Amorphous Silica:
Oral LD50 (Rat) >5000 mg/kg
Dermal LD50 (Rabbit) >2000mg/kg

11. TOXICOLOGICAL INFORMATION

Clay:
Oral LD50 (Rat) >5000 mg/kg
Dermal LD50 (Rabbit) >5000mg/kg
Nitrogen
Simple asphyxiant

Specific Target Organ Toxicity (STOT) – single exposure
Monoammonium Phosphate: Available data indicates this component is not expected to cause target organ effects after a single exposure.
Ammonium Sulfate: Available data indicates this component is not expected to cause target organ effects after a single exposure.
Nitrogen: Exposure to nitrogen gas at high concentrations can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations can cause dizziness, shortness of breath, unconsciousness or asphyxiation.

Specific Target Organ Toxicity (STOT) – repeat exposure
Monoammonium Phosphate: Available data indicates this component is not expected to cause target organ effects after repeat exposure.
Ammonium Sulfate: Available data indicates this component is not expected to cause target organ effects after repeat exposure.

Serious Eye damage/Irritation
Monoammonium Phosphate: Not irritating (rabbit)
Ammonium Sulfate: Not irritating (rabbit)
Mica: Not irritating (rabbit)

Skin Corrosion/Irritation
Monoammonium Phosphate: Not irritating in rabbit test study
Ammonium Sulfate: Not irritating (rabbit)
Mica: Not irritating (rabbit)

Respiratory or Skin Sensitization
Monoammonium Phosphate: Not skin sensitizing based on test (Mouse local lymphnode assay (LLNA)) on an analogous compound
Ammonium Sulfate: Not sensitizing in Guinea pig maximisation test

Carcinogenicity
Mica may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC has classified Silica Dust, Crystalline, in the form of quartz or cristobalite as 1 (carcinogenic to humans).

Germ Cell Mutagenicity
Monoammonium Phosphate: Not mutagenic in the mouse lymphoma cells in mammalian cell gene mutation assay
Ammonium Sulfate: Negative results in Ames Test, in vitro mammalian chromosome aberration test, and mammalian cell gene mutation assay.

11. TOXICOLOGICAL INFORMATION

Reproductive Toxicity
Monoammonium Phosphate: Available data indicates this component is not expected to cause reproductive toxicity or birth defects.
Ammonium Sulfate: Available data indicates this component is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Monoammonium Phosphate:
LC50 rainbow trout >100 mg/l 96h
LC50 water flea 1790 mg/l 72h (similar substance)

Mobility in soil
No relevant studies identified.

Persistence/Degradability
No relevant studies identified.

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of container in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment. Specific volumes, pressures or hardware configurations containing such materials can dictate various different hazard classifications for transportation and labelling requirements. Under Federal Regulations only trained and qualified individuals are permitted to label and ship products following the applicable Department of Transportation (DOT), Federal Aviation Administration (FAA), Transport Canada (TC), International Maritime Dangerous Goods (IMDG) or International Air Transport Association (IATA) requirements.

15. REGULATORY INFORMATION

United States TSCA Inventory
This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

15. REGULATORY INFORMATION

Canada DSL Inventory
All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

SARA Title III Sect. 311/312 Categorization: Pressurized
Pressure hazard
SARA Title III Sect. 311/312 Categorization: Non-pressurized
None

SARA Title III Sect. 313
This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings
NFPA Code for Health - 1
NFPA Code for Flammability - 0
NFPA Code for Reactivity - 0
NFPA Code for Special Hazards - None

HMIS Ratings
HMIS Code for Health - 1
HMIS Code for Flammability - 0
HMIS Code for Physical Hazard - 0
HMIS Code for Personal Protection - See Section 8
*Chronic

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS#: Chemical Abstracts Service Number
EC50: Effect Concentration 50%
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date: April 10, 2015
Replaces: February 9, 2015
Changes made: Updated to GHS Classification.

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

16. OTHER INFORMATION

Prepared By: EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Kidde Residential & Commercial assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.

ARI When Quality Counts PO Box 510, Orchard Hill, GA 30266	Material Safety Data Sheet Date: January, 2007

Section I - Product Identification

Manufacturer's Name:	ARI	**Emergency Phone #:**	800-241-5064
Address:	PO Box 510, Orchard Hill, GA 30266		
Trade Name:	ARI Wasp and Hornet Killer	**EPA #:**	7754-44
Synonyms:	Bee Bopper II		

Section II - Material Analysis/Active Ingredients

Component or Material Chemical Name	% of Mixture	CAS #	TLV
Tetramethrin (1-cyclohexene-1, 2-dicarbo-ximido) methyl 2, 2-dimethyl-3- (2-methyl-propenyl) cyclopropane-carboxylate	0.20%	7696-12-0	
3-Phenoxybenzyl- (1RS, 3S; 1RS, 3SR) -2, 2-dimethyl -3- (2-methylprop-1-enyl) cyclopropane-carboxylate distillate- Vista LPA	0.0125%	26002-80-2	
Carbon Dioxide - CO2	3.00%	124-38-9	

Section III - Sara Title III/Section 313 Supplier Notification

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	% by Weight

This product contains no section 313 chemicals.

Section IV - Physical Data

Boiling Point:	369 - 498 ° F
Solubility in H2O % by weight	2.1 ppm
Specific Gravity H2O = 1	.81
Vapor pressure in can PSI at 70 degrees F	In can PSI at 70 F:100 lbs
% Volatiles by Volume	
PH	
Appearance and Odor	Pale yellow-colored, oily liquid with odor of petroleum solvent

Section V - Fire and Explosion Data

Flash Point (Closed cup)	152 ° F
Flammable Explosive Limits (% volume in air)	Lower: 2.5; Upper: N/A
Extinguishing Methods	Use foam, dry chemical or CO2
Special fire and Explosion Procedures	Self-contained breathing apparatus with a full face piece operated in pressure demand mode
Unusual Fire and Explosion Hazard	Material is highly volatile. DO NOT expose to open flames, welding or cutting torch, or electric motors, or other sources of ignition.

Section VI - Health Hazard Information

HEALTH HAZARD DATA - ROUTES OF EXPOSURE

Occupational Exposure Limit	Not established
Carcinogenicity	Not established, but none of the ingredients are considered carcinogenic.
Primary Routes of Entry	Skin, Inhalation

EMERGENCY AND FIRST AID PROCEDURES

Symptoms and Effects of Overexposure	Route of Entry	Emergency and First Aid Information
Force of released product may damage the eyes. Non-volatiles may cause temporary irritation, tearing and blurred vision.	EYES	Immediately flush with large amounts of water for at least 15 minutes. If irritation persists, get medical attention.
Prolonged or repeated exposure can cause irritation and reddening of the skin.	SKIN	Immediately flush affected areas with water. If irritation persists, remove contaminated clothing and wash affected areas with soap and water.
Excessive inhalation may cause nasal and respiratory irritation.	INHALATION	Remove affected person to fresh air. Give oxygen, if necessary. If breathing has stopped, administer artificial respiration and get medical attention immediately.
Can cause stomach irritation, resulting in nausea, cramps and vomiting.	INGESTION	DO NOT induce vomiting. Keep affected person warm and quiet and get medical attention immediately.

Section VII - Reactivity Data	
Condition contributing to instability	High temperatures
Incompatibility	May react to strong oxidizers
Hazardous decomposition products	None expected
Conditions contributing to hazardous polymerization	None

Section VIII - Spill or Leak Procedures STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	
Neutralizing chemical	Eliminate all ignition sources. Contain the spill (prevent this product from reaching surface waters or other water supplies.) Soak up the spill with an appropriate absorbent and transfer into waste containers for disposal. Clean the spill area with detergent and water.
Waste disposal method	Contaminated absorbent and wash water should be disposed of according to local, state, and federal regulations.
RCRA/CERCLA Hazardous Waste	Not Applicable
Emergency Telephone Numbers	CHEMTREC 1-800-424-9300 (for transportation spills)

Section IX - Industrial Hygiene Control Measures	
Ventilation Requirements	If product must be used indoors make sure adequate ventilation is used.
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT	
Respiratory (specific in detail)	In the absence of proper ventilation, use a respirator approved by NIOSH/MSHA for use with pesticides and organic solvents.
Eye	Safety glasses
Gloves	Wear rubber gloves
Other Clothing and Equipment	Avoid exposure with skin and clothing

Section X - Special Precautions	
Precautionary Statements	DO NOT spray toward eyes or mouth.
Other Handling and Storage Requirements	This product is toxic to fish. Do not contaminate ponds, lakes or streams by cleaning of equipment or disposal of waste. Contents are packed under pressure. Do not store at temperatures above 130°F.
Department of Transportation Information **PROPER SHIPPING NAME:** **HAZARD CLASS:**	 CONSUMER COMMODITY ORM-D
Prepared by: ARI	**Date:** January, 2007

SAFETY DATA SHEET

1. Identification

Product identifier **MAP-Pro™ Premium Hand Torch Fuel**

Other means of identification

SDS number WC001

Product code Varies

Recommended use Hand Torch Fuel

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 300 E. Breed St., Chilton, WI 5301
United States

Contact person Ann Stiefvater

E-mail address Ann.Stiefvater@worthingtonindustries.com

Telephone number 1-920-849-1740

Emergency telephone number 1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

2. Hazard(s) identification

Physical hazards Flammable gases — Category 1
Gases under pressure — Compressed gas

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) May displace oxygen and cause rapid suffocation.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Propylene		115-07-1	99.5 - 100

Impurities

Chemical name	CAS number	%
Propane	74-98-6	0 - 0.5

Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm water (between 100 F/38 C and 110 F/43 C, not exceeding 112 F/44 C). Keep immersed for 20 to 40 minutes. Seek medical assistance.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Ingestion is not a typical route of exposure for gases or liquefied gases.
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory disorders. Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical, CO2, water spray, fog, or foam.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move container from fire area if it can be done without risk. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away. Ensure adequate ventilation. In case of inadequate ventilation, use respiratory protection. Wear appropriate personal protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Ventilate well, stop flow of gas or liquid if possible. Immediately contact emergency personnel. For waste disposal, see Section 13 of the SDS.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sanitary sewers, waterways and/or groundwater.

7. Handling and storage

Precautions for safe handling	Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Do not breathe gas. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.
Conditions for safe storage, including any incompatibilities	Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Impurities	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Propylene (CAS 115-07-1)	TWA	500 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Impurities	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Follow standard monitoring procedures.

Appropriate engineering controls Provide adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety glasses or goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear protective clothing appropriate for the risk of exposure.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance Colorless liquefied gas.

Physical state Gas.

Form Compressed liquefied gas.

Color Colorless

Odor Hydrocarbon or mercaptan if odorized.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point -301 °F (-185 °C)

Flash point -162.0 °F (-107.8 °C)

Evaporation rate Not applicable.

Flammability (solid, gas) Extremely flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2 %

Flammability limit - upper (%) 11 %

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 109.73 PSIG (21°C)

Vapor density 1.5 (0°C)

Relative density	0.52 (liquid)
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	927 °F (497.22 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
VOC (Weight %)	100 %

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not likely, due to the form of the product.
Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

Information on toxicological effects

Acute toxicity High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.

Components	Species	Test Results
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours

Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Propylene (CAS 115-07-1) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	May cause central nervous system effects.

12. Ecological information

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Persistence and degradability	The product is readily biodegradable.
Bioaccumulative potential	The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Propylene (CAS 115-07-1)	1.77
Propane (CAS 74-98-6)	2.36

Mobility in soil	May evaporate quickly.
Mobility in general	May evaporate quickly.
Other adverse effects	None known.

13. Disposal considerations

Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	19, T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315

IATA

UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1

Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Propane (CAS 74-98-6)	LISTED
Propylene (CAS 115-07-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	99.5 - 100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)

Hazardous substance

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. New Jersey Worker and Community Right-to-Know Act

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Rhode Island RTK

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

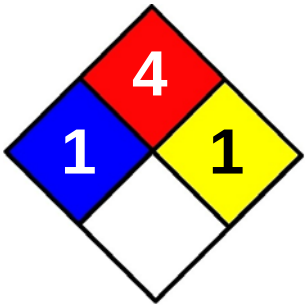
Issue date 07-December-2012

Revision date 28-April-2014

Version # 02

Further information HMIS® is a registered trade and service mark of the NPCA.
HMIS Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard.
Health: 1. Flammability: 4. Physical hazard: 1.

NFPA Ratings



Disclaimer All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.

JohnsonDiversey

Windex Powerized Foaming Glass Cleaner (Aerosol)

HMIS		NFPA	Personal protective equipment
Health	1	1	
Fire Hazard	4	4	
Reactivity	0	0	

Version Number: 3 *Preparation date: 2006-02-23*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Windex Powerized Foaming Glass Cleaner (Aerosol)

MSDS #: 126062003
Product code: 126062003, 90129
Recommended use: Cleaning product. Industrial/Institutional.

Manufacturer, importer, supplier:

Consumer Branded Professional Products
JohnsonDiversey, Inc.
8310 16th Street
Sturtevant, Wisconsin 53177-0902
Phone: (888) 352-2249

Canadian Headquarters
JohnsonDiversey - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
CAUTION. CONTENTS UNDER PRESSURE. MAY BE MILDLY IRRITATING TO EYES.

Principle routes of exposure: Skin contact. Eye contact. Inhalation.
Eye contact: May be mildly irritating to eyes.
Skin contact: None known.
Inhalation: May be irritating to nose, throat, and respiratory tract.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isobutane	75-28-5	5 - 10%	Not available	Not available	Not available
Isopropyl alcohol	67-63-0	1 - 5%	5000 mg/kg (rat)	12800 mg/kg (rabbit)	16000 ppm/8H (rat)
2-butoxyethanol	111-76-2	1 - 5%	470 mg/kg (rat)	220 mg/kg (rabbit)	450 ppm (rat)

4. FIRST AID MEASURES

Eye contact: Flush immediately with plenty of water. Get medical attention if irritation occurs.
Skin contact: Rinse with plenty of water.
Inhalation: If breathing is affected, remove to fresh air. Get medical attention.
Ingestion: No specific first aid measures are required.
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, water spray, foam, carbon dioxide.
Specific hazards: Aerosol product - Containers may rocket or explode in heat of fire. Keep product and empty container away from heat and sources of ignition. NFPA 30B Level 1 Aerosol .
Unusual hazards: None known
Specific methods: Aerosol Product - Containers may rocket or expode in heat of fire. Use water spray to keep fire-exposed containers cool.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: No information available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Use appropriate containment to avoid environmental contamination. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 degrees C or 120 degrees F. Do not pierce or burn, even after use. Store in a cool, dry, well ventilated area away from heat or open flame. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements. General room ventilation is adequate.

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions
Respiratory protection: No special requirements under normal use conditions
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Isopropyl alcohol	67-63-0	400 ppm (STEL) 200 ppm (TWA)	400 ppm (TWA) 980 mg/m^3 (TWA)	500 ppm (STEL) 1225 mg/m^3 (STEL) 980 mg/m^3 (TWA) 400 ppm (TWA)
2-butoxyethanol	111-76-2	20 ppm (TWA)	Skin 240 mg/m^3 (TWA) 50 ppm (TWA)	75 ppm (STEL) 360 mg/m^3 (STEL) 120 mg/m^3 (TWA) 26 ppm (TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Aerosol
pH: 10.5 - 11
Appearance: Aerosol
Color: Colourless
Odor: Ammoniacal
Specific gravity: 0.96
Density: 0.96
VOC: 11.9
Flash point: <19.4 (°F) <-7 (°C)
Solubility: No information available

Bulk density: No information available
Dilution pH: No information available.
Vapor density: No information available
Evaporation rate: No information available
Boiling point/range: Not determined
Melting point/range: Not determined
Decomposition temperature: Not determined
Autoignition temperature: No information available
Viscosity: No information available
Partition coefficient (n-octanol/water): No information available
Solubility in other solvents: No information available

10. STABILITY AND REACTIVITY

Stability: The product is stable.
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.
Materials to avoid: None known.
Conditions to avoid: Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Component information: Oral LD50 estimated to be greater than 5000 mg/kg
See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known

Target organ effects: None known

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	NTP	IARC	OSHA
Isopropyl alcohol	67-63-0		1 3	X

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
If possible, recycle empty aerosol cans to the nearest steel recycling center . Dispose of according to all federal, state and local applicable regulations .

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Ammonium hydroxide	1336-21-6	X	X	-	-
Water	7732-18-5	-	-	-	-
Isopropyl alcohol	67-63-0	X	X	X	X
2-butoxyethanol	111-76-2	X	X	X	X
Isobutane	75-28-5	X	X	X	-

CERCLA / SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Ammonium hydroxide	1336-21-6	0.1 - 1.5%	1000		
Isopropyl alcohol	67-63-0	1 - 5%			X
2-butoxyethanol	111-76-2	1 - 5%			X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
2-butoxyethanol	X		

Canada
WHMIS hazard class: A Compressed gases, D2B Toxic materials .

Ingredient(s)	CAS #	NPRI
Isopropyl alcohol	67-63-0	X
2-butoxyethanol	111-76-2	X

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1226

SC Johnson
A FAMILY COMPANY

WINDEX® ORIGINAL GLASS & SURFACE WIPES

Version 2.1

Revision Date 12/16/2010

Print Date 01/17/2011

MSDS Number 350000003614
SITE_FORM Number
30000000000000002954.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name	:	WINDEX® ORIGINAL GLASS & SURFACE WIPES
Use of the Substance/Mixture	:	Hard Surface Cleaner
Company	:	S.C. Johnson & Son, Inc. 1525 Howe Street Racine WI 53403-2236
Emergency telephone number	:	24 Hour Transport & Medical Emergency Phone (866) 231-5406 24 Hour International Emergency Phone (952) 852-4647

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor	:	white / Liquid absorbed by inert carrier material / ammoniacal
Immediate Concerns	:	No adverse effects expected when used as directed.

Potential Health Effects

Exposure routes	:	Eye, Skin, Inhalation, Ingestion.
Eyes	:	May cause: Mild eye irritation
Skin	:	Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	:	No adverse effects expected when used as directed.
Ingestion	:	May cause abdominal discomfort.
Aggravated Medical Condition	:	Persons with pre-existing skin disorders may be more susceptible to irritating effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Isopropanol	67-63-0	1.00 - 5.00

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For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact	:	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Skin contact	:	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Inhalation	:	No special requirements
Ingestion	:	Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Further information	:	Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.
Flash point	:	> 93 °C > 199.4 °F Method: Tag Closed Cup (TCC)
Lower explosion limit	:	Note: not applicable
Upper explosion limit	:	Note: not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	No special precautions required.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods for cleaning up	:	Sweep up and shovel into suitable containers for disposal. Clean residue from spill site.

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7. HANDLING AND STORAGE

Handling

Advice on safe handling : Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isopropanol	67-63-0	980 mg/m3	400 ppm	-	OSHA TWA
Isopropanol	67-63-0	-	400 ppm	-	ACGIH STEL
Isopropanol	67-63-0	-	200 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : Use only with adequate ventilation.

Hand protection : No special requirements.

Eye protection

Industrial setting : No special requirements.

Household setting : Avoid contact with eyes.

Skin and body protection : No special requirements.

Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid absorbed by inert carrier material
Color	:	white
Odor	:	ammoniacal
pH	:	8.5 - 10.5
Boiling point	:	no data available
Freezing point	:	no data available
Flash point	:	> 93 °C > 199.4 °F Method: Tag Closed Cup (TCC)
Evaporation rate	:	no data available
Autoignition temperature	:	no data available
Lower explosion limit	:	not applicable
Upper explosion limit	:	not applicable
Vapour pressure	:	similar to water
Density	:	no data available
Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	no data available
Viscosity, dynamic	:	not applicable
Volatile Organic Compounds (California Air Resource Board – CARB) Total VOC (wt. %)	:	2.4 % - does not include any applicable regulatory exemptions

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Direct sources of heat.
Materials to avoid	:	Do not mix with bleach or any other household cleaners.
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous reactions	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 estimated > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 estimated > 2.58 mg/l
Acute dermal toxicity	:	LD50 estimated > 5,000 mg/kg

Chronic effects

Carcinogenicity	:	no data available
Mutagenicity	:	no data available
Reproductive effects	:	no data available
Teratogenicity	:	no data available
Sensitisation	:	Not known to be a sensitizer.

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12. ECOLOGICAL INFORMATION

Ecotoxicity effects : no data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

RCRA waste class : Non-hazardous waste

SCJ product category : SNH: Solid Non-Hazardous

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.
Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

Sea transport

- *IMDG:*

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

Air transport

- *ICAO/IATA:*

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

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15. REGULATORY INFORMATION

Notification status	:	All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Notification status	:	All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).
California Prop. 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Canada Regulations	:	This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	1
Reactivity	0

NFPA Ratings

Health	1
Fire	1
Reactivity	0
Special	

Further information
This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

SC Johnson
A FAMILY COMPANY

WINDEX® ORIGINAL GLASS & SURFACE WIPES

Version 2.1

Revision Date 12/16/2010

Print Date 01/17/2011

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JohnsonDiversey

Clean is just the Beginning

Windex Powerized Glass Cleaner (RTU)

HMIS		NFPA	Personal protective equipment
Health	0	0	**None Required**
Fire Hazard	1	1	
Reactivity	0	0	

Version Number: 3 *Preparation date: 2005-05-20*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Windex Powerized Glass Cleaner (RTU)

MSDS #: 126011004
Product code: 90135, 90139, 90122, 90940, CB006722, CB807701, 3694044, 3694052, 94123
Recommended use: Cleaning product.

Manufacturer, importer, supplier:
Consumer Branded Professional Products
JohnsonDiversey, Inc.
8310 16th Street
Sturtevant, Wisconsin 53177-0902
Phone: (888) 352-2249

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
The product contains no substances which at their given concentration, are considered to be hazardous to health

Principle routes of exposure: Eyes. Skin. Inhalation. Ingestion.
Eye contact: None known.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropyl alcohol	67-63-0	1 - 5%	5000 mg/kg (rat)	12800 mg/kg (rabbit)	16000 ppm/8H (rat)

4. FIRST AID MEASURES

Eye contact: Rinse with plenty of water.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, water spray, foam, carbon dioxide.
Specific hazards: Although this product has a flash point below 200 Deg. F, it is an aqueous solution containing an alcohol and does not sustain combustion.
Unusual hazards: None known
Specific methods: No special methods required

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment

Environmental precautions and clean-up methods: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

Handling:
Avoid contact with eyes. COMBUSTIBLE LIQUID AND VAPOR . Keep away from open flames, hot surfaces and sources of ignition. Handle in accordance with good industrial hygiene and safety practice. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Keep tightly closed in a dry, cool and well-ventilated place. Protect from freezing. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements. General room ventilation is adequate.

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions
Respiratory protection: No special requirements under normal use conditions
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Isopropyl alcohol	67-63-0	400 ppm (STEL) 200 ppm (TWA)	400 ppm (TWA) 980 mg/m^3 (TWA)	500 ppm (STEL) 1225 mg/m^3 (STEL) 980 mg/m^3 (TWA) 400 ppm (TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
pH: 11.45
Appearance: Liquid
Color: Blue
Odor: Ammoniacal
Specific gravity: 0.996
Density: 0.996
VOC: 3.8
Flash point: 131 (°F) 55 (°C)
Solubility: Soluble

Bulk density: No information available
Dilution pH: No information available.
Vapor density: No information available
Evaporation rate: No information available
Boiling point/range: Not determined
Melting point/range: Not determined
Decomposition temperature: Not determined
Autoignition temperature: No information available
Viscosity: No information available
Partition coefficient (n-octanol/water): No information available
Solubility in other solvents: No information available

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.
Conditions to avoid: Do not freeze.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Oral LD50 estimated to be greater than 5000 mg/kg. Dermal LD50 estimated to be > 2000 mg/kg.
Component Information: See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Dispose of according to all federal, state and local applicable regulations

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Hexyloxyethanol	112-25-4	-	-	-	-
Ammonium hydroxide	1336-21-6	X	X	-	-
Water	7732-18-5	-	-	-	-
Isopropyl alcohol	67-63-0	X	X	X	X

CERCLA / SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Hexyloxyethanol	112-25-4	0.1 - 1.5%			X
Ammonium hydroxide	1336-21-6	0.1 - 1.5%	1000		
Isopropyl alcohol	67-63-0	1 - 5%			X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
Hexyloxyethanol	X		

SARA 311/312 Hazard Categories

Immediate:	N
Delayed:	N
Fire:	Y
Reactivity:	N
Sudden Release of Pressure:	N

Canada
WHMIS hazard class: Not for sale in Canada.

Ingredient(s)	CAS #	NPRI
Isopropyl alcohol	67-63-0	X

16. OTHER INFORMATION

Reason for revision:	Not applicable
Prepared by:	NAPRAC
Additional advice:	None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

JohnsonDiversey

Clean is just the Beginning

Windex Powerized Glass Cleaner (RTU)

HMIS		NFPA	Personal protective equipment
Health	0	0	**None Required**
Fire Hazard	1	1	
Reactivity	0	0	

Version Number: 3 *Preparation date: 2005-05-20*

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Windex Powerized Glass Cleaner (RTU)

MSDS #: 126011004
Product code: 90135, 90139, 90122, 90940, CB006722, CB807701, 3694044, 3694052, 94123
Recommended use: Cleaning product.

Manufacturer, importer, supplier:
Consumer Branded Professional Products
JohnsonDiversey, Inc.
8310 16th Street
Sturtevant, Wisconsin 53177-0902
Phone: (888) 352-2249

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
The product contains no substances which at their given concentration, are considered to be hazardous to health

Principle routes of exposure: Eyes. Skin. Inhalation. Ingestion.
Eye contact: None known.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropyl alcohol	67-63-0	1 - 5%	5000 mg/kg (rat)	12800 mg/kg (rabbit)	16000 ppm/8H (rat)

4. FIRST AID MEASURES

Eye contact: Rinse with plenty of water.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.
Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, water spray, foam, carbon dioxide.
Specific hazards: Although this product has a flash point below 200 Deg. F, it is an aqueous solution containing an alcohol and does not sustain combustion.
Unusual hazards: None known
Specific methods: No special methods required

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Extinguishing media which must not be used for safety reasons: None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment

Environmental precautions and clean-up methods: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

Handling:
Avoid contact with eyes. COMBUSTIBLE LIQUID AND VAPOR . Keep away from open flames, hot surfaces and sources of ignition. Handle in accordance with good industrial hygiene and safety practice. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Keep tightly closed in a dry, cool and well-ventilated place. Protect from freezing. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements. General room ventilation is adequate.

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions
Respiratory protection: No special requirements under normal use conditions
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Isopropyl alcohol	67-63-0	400 ppm (STEL) 200 ppm (TWA)	400 ppm (TWA) 980 mg/m^3 (TWA)	500 ppm (STEL) 1225 mg/m^3 (STEL) 980 mg/m^3 (TWA) 400 ppm (TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
pH: 11.45
Appearance: Liquid
Color: Blue
Odor: Ammoniacal
Specific gravity: 0.996
Density: 0.996
VOC: 3.8
Flash point: 131 (°F) 55 (°C)
Solubility: Soluble

Bulk density: No information available
Dilution pH: No information available.
Vapor density: No information available
Evaporation rate: No information available
Boiling point/range: Not determined
Melting point/range: Not determined
Decomposition temperature: Not determined
Autoignition temperature: No information available
Viscosity: No information available
Partition coefficient (n-octanol/water): No information available
Solubility in other solvents: No information available

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.
Conditions to avoid: Do not freeze.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Oral LD50 estimated to be greater than 5000 mg/kg. Dermal LD50 estimated to be > 2000 mg/kg.
Component Information: See Section 3

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Dispose of according to all federal, state and local applicable regulations

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Hexyloxyethanol	112-25-4	-	-	-	-
Ammonium hydroxide	1336-21-6	X	X	-	-
Water	7732-18-5	-	-	-	-
Isopropyl alcohol	67-63-0	X	X	X	X

CERCLA / SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Hexyloxyethanol	112-25-4	0.1 - 1.5%			X
Ammonium hydroxide	1336-21-6	0.1 - 1.5%	1000		
Isopropyl alcohol	67-63-0	1 - 5%			X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
Hexyloxyethanol	X		

SARA 311/312 Hazard Categories

Immediate:	N
Delayed:	N
Fire:	Y
Reactivity:	N
Sudden Release of Pressure:	N

Canada
WHMIS hazard class: Not for sale in Canada.

Ingredient(s)	CAS #	NPRI
Isopropyl alcohol	67-63-0	X

16. OTHER INFORMATION

Reason for revision:	Not applicable
Prepared by:	NAPRAC
Additional advice:	None

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SAFETY DATA SHEET

Confirms to OSHA Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012

Product: Leather Wipes-91 **Revision Date:** 29-Jan-2015

SECTION 1 – IDENTIFICATION

Product Identifier

Product Name: **Leather Wipes**

Product Code: **91**

Recommended Use of the Chemical and Restrictions for Use

Recommended Use: Cleaner

Restrictions for Use: Use only as directed.

Details of the Supplier

Manufacturer: Weiman Products
755 Tri-State Parkway
Gurnee, IL 60031
847-263-3500

Emergency Phone Number

24-Hour Number: 1-800-535-5053

International: 1-352-323-3500

SECTION 2 – HAZARDS IDENTIFICATION

Classification

Not classified

Label Elements

Hazard Symbols(s): None

Signal Word(s): None

Hazard Statement(s): None

Precautionary Statement(s): None

Other Hazards

6% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Wt %
3,5,7-Triaza-1-azoniatricyclodecane-1-(3-chloro-2propenyl)-, chloride	4080-31-3	0.1-1

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4 – FIRST AID MEASURES

First Aid Measures

Inhalation: Not a normal route of exposure. If symptoms develop, remove to fresh air. Get medical attention if condition worsens.

Eye Contact: In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

Ingestion: May result in obstruction and irritation if ingested. If large amounts of liquid are swallowed seek medical attention immediately.

Skin: If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

Most Important Symptoms and Effects (Acute and Delayed)

Inhalation: May cause respiratory tract irritation.

Eye Contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physician: Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Suitable: Treat for surrounding material.

Unsuitable: None known.

Specific Hazards Arising from Chemical

Product will burn if exposed to fire. Products of combustion include but are not limited to: oxides of carbon.

Protective Equipment and Precautions for Firefighters

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental Precautions: See Section 12 for ecological information.

Methods and Material for Containment and Cleaning Up

Pick up large pieces, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Scoop up material and place in a disposal container.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling

Handling: Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Handle in accordance with good industrial hygiene and safety practice. Wash hands after use. Do not eat, drink, or smoke when using this product.

General Hygiene Advice: Launder contaminated clothing before use. Wash hands before eating, drinking, or smoking.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Keep out of the reach of children. Keep container tightly closed.

Incompatible Materials: None known.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
3,5,7-Triaza-1-azoniatricyclodecane-1-(3-chloro-2propenyl)-, chloride (4080-31-3)	Not available	Not available	Not available

Appropriate Engineering Controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Individual Protection Measures

Respiratory Protection: None necessary under normal conditions of use.

Skin and Body Protection: None necessary under normal conditions of use.

Eye/Face Protection: None necessary under normal conditions of use.

General Work/Hygienic Practices: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle in accordance with good industrial hygiene and safety practices.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White wipes saturated with white emulsion liquid

Odor: Lemon

Odor threshold: Not determined

pH: 7.5

Melting point/freezing point: Not determined

Initial boiling point and boiling range: Not determined

Flash point: >93.3ºC (>200 ºF) TCC (liquid)

Evaporation rate: Not determined

Flammability (solid, gas): Not flammable

Upper/lower flammability or explosive limits: Not determined

Vapor pressure: Not determined

Vapor density: Not determined

Relative density: 0.98

Solubility(ies): Not determined

Partition coefficient (n-octanol/water): Not determined

Auto-ignition temperature: Not determined

Decomposition temperature: Not determined

Viscosity: Not determined

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: None under normal use.

Conditions to avoid: None known.

Incompatible materials: None known.

Hazardous decomposition products: May include and are not limited to: oxides of carbon.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Likely Routes of Exposure: Inhalation, skin contact, eye contact, ingestion

Information Related to Physical, Chemical, and Toxicological Effects

See section 4 of this SDS.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity: **NTP:** No **IARC:** No **OSHA:** No

Numerical Measures of Toxicity

Washing Machine Cleaner & Deodorizer	
ATE (oral)	>2000 mg/kg, rat
ATE (dermal)	>2000 mg/kg, rabbit
ATE (inhalation)	>20 mg/l/4h, rat

Component Information:

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
3,5,7-Triaza-1-azoniatricyclodecane-1-(3-chloro-2propenyl)-, chloride (4080-31-3)	500 mg/kg (rat)	565 mg/kg (rabbit)	Not available

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Not established

Persistence and degradability: Not established

Bioaccumulative potential: Not established

Mobility in soil: Not established

Other adverse effects: No additional information available.

SECTION 13 – DISPOSAL CONSIDERATIONS

See section 8 of this SDS for exposure controls and personal protection.

Dispose of the product and container in accordance with all applicable local, state, and federal regulations.

SECTION 14 – TRANSPORT INFORMATION

Note: Classification changes based on quantity, packaging, and method of shipment. See current shipping paper for most up to date shipping information.

DOT (Ground): Not regulated

IATA (Air): Not regulated

IMDG (Vessel): Not regulated

SECTION 15 – REGULATORY INFORMATION

All ingredients in this product are listed or are excluded from listing on the US Toxic Substances Act (TSCA) Chemical Substance Inventory.

This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration (OSHA) applicable to this Safety Data Sheet differ from the requirements of the CPSC and as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

SECTION 16 – OTHER INFORMATION

Issue Date: 29-Jan-2015

Revision Date: 29-Jan-2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designed and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Osmose MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET: **POLE WRAP**

SECTION I

MSDS NUMBER:	42-UTL
MSDS CODE:	UTL
SYNONYMS:	Patox II
MANUFACTURED BY:	Osmose Utilities Services, Inc.
DIVISION:	N/A
EPA REGISTRATION NUMBER:	75341-4
EMERGENCY PHONE:	CHEMTREC: 1(800) 424-9300
OTHER CALLS:	(716) 882-5905
ADDRESS:	980 Ellicott Street, Buffalo, NY 14209
MSDS PREPARED BY:	Teri Muchow
DATE PREPARED:	February 6, 2003
DATE LAST REVISED:	N/A

ADDITIONAL INFORMATION

CHEMTREC'S EMERGENCY TELEPHONE NUMBER IS TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

TRADE NAME: Pole Wrap					
INGREDIENT NAME	CAS	OSHA PEL	ACGIH TLV	OTHER	%
Sodium Fluoride	7681-49-4	2.5 mg/M^3 as F	2.5 mg/M^3 as F	RQ = 1000 pounds	70.6

SECTION III - CHEMICAL CHARACTERISTICS

BOILING POINT	MELTING POINT	FREEZING POINT	SPECIFIC GRAVITY (H_20 = 1)	PERCENT VOLATILE BY VOLUME	THEORETICAL VOC CONTENT (PERCENT OF WEIGHT)
N/A	1818°F	N/A	N/A	N/A	N/A

WEIGHT PER GALLON	pH:	VAPOR PRESSURE	VAPOR DENSITY	DENSITY	EVAPORATION RATE BASIS (N-BUAC) = 1
N/A	N/A	N/A	N/A	Not Available	N/A

SOLUBILITY IN WATER: 4.4% at 75°F	REACTIVITY IN WATER: N/A
APPEARANCE AND ODOR: Gray bandage, odorless.	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	METHOD	FLAMMABLE LIMITS IN AIR (%)	AUTOIGNITION TEMPERATURE
N/A	N/A	N/A	N/A

NFPA CODES	HEALTH	1	***HMIS CODES:***	HEALTH	1
	FLAMMABILITY	0		FLAMMABILITY	0
	REACTIVITY	0		REACTIVITY	0
	OTHER	N/A		PROTECTION	B

EXTINGUISHER MEDIA: Water fog, foam, CO_2, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Toxic vapors given off in fire. Wear full protective clothing and self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: May burn, but does not ignite readily.

SECTION V - REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y
CONDITIONS TO AVOID (REGARDING STABILITY): N/A
INCOMPATIBILITY (MATERIALS TO AVOID): Acids
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of F^- and Na_2O
HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N
CONDITIONS TO AVOID (REGARDING POLYMERIZATION): N/A

SECTION VI - HEALTH HAZARDS

ROUTES OF ENTRY: Skin.
SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE: May be fatal if swallowed. Possible skin irritation. Contact with eye will cause irritation. Due to physical nature of this product, oral, eye and inhalation exposure unlikely.
CHRONIC OVEREXPOSURE: N/A
CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?:

- NATIONAL TOXICOLOGY PROGRAM (Y/N): N
- IARC MONOGRAPHS (Y/N): N
- OSHA (Y/N): N

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

TOXICITY DATA

Dermal LD50	> 2000 mg/Kg
Eye Irritation	Moderately Irritating
Skin Irritation	Non-irritant
Skin Sensitization	NOT a skin sensitizer

EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY PHONE NUMBER OF MANUFACTURER: CHEMTREC 1(800) 424-9300

1. INHALATION: Remove victim to fresh air. Apply respiration if indicated. Call a physician immediately.
2. EYE CONTACT: Flush eyes with plenty of water. Call a physician immediately.
3. SKIN CONTACT: Remove contaminated clothing and wash affected area with soap and water.
4. INGESTION: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting on or give anything to an unconscious person.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

USDOT SHIPPING DESCRIPTION: Sodium fluoride, solid, 6.1, UN1690, III

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in dry area. Do not store near open flames. Use good personal hygiene. Applicators must not eat, drink, or use tobacco products during those parts of the application process that may expose them to the wood treatment formulation.
OTHER PRECAUTIONS: Read and follow label instructions.
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: N/A - Due to physical nature of product.
WASTE DISPOSAL METHODS: Bury in approved landfill. Dispose in accordance with all Federal, State and local laws.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Normally not necessary due to physical nature of product.
VENTILATION REQUIREMENTS: Local exhaust is sufficient.
PROTECTIVE GLOVES: Rubber
EYE PROTECTION: Wear protective eyewear (goggles, face shield or safety glasses).
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A
WORK/HYGIENIC PRACTICES: Follow good work practices. Wash hands before eating, smoking or using tobacco products. Remove contaminated clothing and wash clothing before reuse.

SECTION IX - REGULATORY INFORMATION:

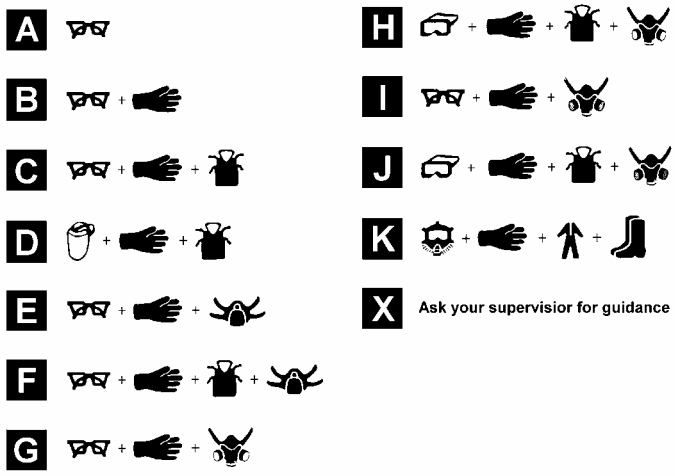
STATE OF CALIFORNIA PROPOSITION 65:
WARNING - This product contains chemicals known to the State of California to cause cancer.

SARA/TITLE III ;SECTION 312 - HAZARD CATEGORIES:

Immediate (Acute) Health: Yes **Reactive Hazard: No**
Delayed (Chronic) Health: No **Sudden Release of Pressure: No**
Fire Hazard: No

SECTION 302:
N/A
SECTION 304:
Sodium fluoride has a reportable quantity of 1,000 pounds.
SECTION 311 & 312:
Report if inventory equals or exceeds 10,000 pounds on any given day.

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS)
PERSONAL PROTECTION INDEX



N/A = Not Applicable

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Information on this form is furnished for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not be used for any other purpose. Use or dissemination of all or any part of this information for any other purpose may result in a violation of law or constitute grounds for legal action.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : A07335 ZEP 2000 416401 20N13

Material number : 000000000000416401

Manufacturer or supplier's details

Company : Zep Inc.

Address : 350 Joe Frank Harris Parkway, SE
Emerson, GA 30137

Telephone : 404-352-1680

Emergency telephone numbers		
For SDS Information	:	Compliance Services 1-877-428-9937
For a Medical Emergency	:	877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency	:	CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	amber, clear
Odour	solvent-like

GHS Classification

Flammable aerosols : Category 1
Gases under pressure : Liquefied gas
Skin irritation : Category 2
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
P403 Store in a well-ventilated place.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration [%]
Naphtha (petroleum), hydrotreated light	64742-49-0	>= 20 - < 30
propane	74-98-6	>= 10 - < 20
butane	106-97-8	>= 10 - < 20
Distillates (petroleum), hydrotreated light	64742-47-8	>= 1 - < 5
heptane	142-82-5	>= 1 - < 5

The exact percentages of disclosed substances are withheld as trade secrets.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Remove contaminated clothing and shoes.
Wash contaminated clothing before reuse.
If skin irritation persists, call a physician.

In case of eye contact	:	Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If in eyes, rinse with water for 15 minutes.
If swallowed	:	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Most important symptoms and effects, both acute and delayed	:	Effects are immediate and delayed. Symptoms may include irritation, redness, pain, and rash. Effects are dependent on exposure (dose, concentration, contact time). Symptoms of overexposure may include disorientation; dizziness; and confusion. May progress to unconsciousness, paralysis, and convulsions. May cause drowsiness or dizziness. Causes skin irritation. Review section 2 of SDS to see all potential hazards.
Notes to physician	:	Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Smoke
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not breathe vapours or spray mist. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Always replace cap after use.
Conditions for safe storage	:	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. No smoking. Keep in a dry, cool and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid	:	Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,800 mg/m3	OSHA P0
		PEL	1,000 ppm 1,800 mg/m3	CAL PEL
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
		PEL	800 ppm 1,900 mg/m3	CAL PEL
Distillates (petroleum), hydrotreated light	64742-47-8	TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA P0
		TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Mist)	5 mg/m3	OSHA P0
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
		PEL (particulate)	5 mg/m3	CAL PEL
heptane	142-82-5	TWA	85 ppm 350 mg/m3	NIOSH REL
		C	440 ppm 1,800 mg/m3	NIOSH REL
		TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA P0
		STEL	500 ppm 2,000 mg/m3	OSHA P0
		PEL	400 ppm 1,600 mg/m3	CAL PEL
		STEL	500 ppm 2,000 mg/m3	CAL PEL
		TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH

Engineering measures : effective ventilation in all processing areas

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection		
Material	:	Protective gloves
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Safety glasses Access to clean water to rinse eyes must be available, options include: eye wash stations or showers, or eye wash bottles with pure water.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Aerosol containing a liquefied gas
Colour	:	amber, clear
Odour	:	solvent-like
Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	> 1
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	0.75 g/cm3
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	not determined

Thermal decomposition	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Heat of combustion	:	31.21 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Vapours may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical Condition	:	None known.
Symptoms of Overexposure	:	Effects are immediate and delayed. Symptoms may include irritation, redness, pain, and rash. Effects are dependent on exposure (dose, concentration, contact time). Symptoms of overexposure may include disorientation; dizziness; and confusion. May progress to unconsciousness, paralysis, and convulsions.

Carcinogenicity:

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Acute toxicity

Product:

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Components:

Distillates (petroleum), hydrotreated light:

Acute oral toxicity : LD50 Rat: > 5,000 mg/kg

Acute inhalation toxicity : LC50 Rat: > 4.6 mg/l
Exposure time: 6 h

Acute dermal toxicity : LD50 Rat: > 2,000 mg/kg

heptane:

Acute inhalation toxicity : LC50 Rat: 103 mg/l
Exposure time: 4 h

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: May irritate eyes.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

Components:
Distillates (petroleum), hydrotreated light:
Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water	:	Remarks: No data available

Components:

butane :

Partition coefficient: n-octanol/water	:	Pow: 2.89

heptane :

Partition coefficient: n-octanol/water	:	log Pow: 5

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

Components:
Distillates (petroleum), hydrotreated light :

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of in accordance with local regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, FLAMMABLE, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, FLAMMABLE, 2.1, (LQ), - Limited quantity

The product as delivered to the customer conforms to packaging requirements for shipment by road under US Department of Transportation (DOT) regulations. Additional transportation classifications noted above are for reference only, and not a certification or warranty of the suitability of the packaging for shipment under these alternative transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
toluene	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Gases under pressure
Skin corrosion or irritation
Specific target organ toxicity (single or repeated exposure)

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

WARNING: This product can expose you to chemicals including toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL This product contains one or more components that are listed on the Canadian NDSL. All other components are on the Canadian DSL.

TSCA On TSCA Inventory

For information on the country notification status for other regions please contact the manufacturer's regulatory group.

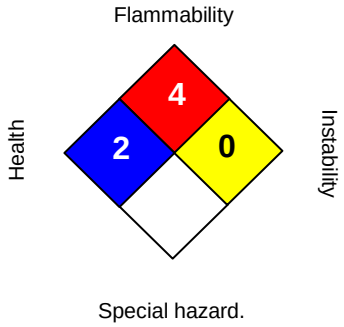
Inventory Acronym and Validity Area Legend:

TSCA (USA), DSL (Canada), NDSL (Canada)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	4
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA - GHS Label Information:

Hazard pictograms :

Signal word : **Danger:**

Hazard statements : Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin irritation. May cause drowsiness or dizziness.

Precautionary statements :

Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves.
Response: IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.
Storage: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place.
Disposal: Dispose of contents/container in accordance with local regulation.

Version:	4.3
Revision Date:	03/01/2018
Print Date:	07/08/2019

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®,Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®,Rexodan®, Mykal™, and a number of private labeled brands.

Material Safety Data Sheet

Zep Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-I-BUY-ZEP (428-9937)
www.zep.com

Section 1. Chemical Product and Company Identification

Product name ZEP-PAR NC

Product use Lubricant Aerosol.

Product code 0107

Date of issue 04/03/09 **Supersedes** 12/28/04

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 1-877-I-BUY-ZEP (428-9937)

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Printing date: 04/03/09

Prepared By
Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

*Hazard Determination System (HDS): Health, Flammability, Reactivity

1	4	0

DANGER !

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. Keep away from sources of ignition - No smoking. CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. VAPOR HARMFUL.

CONTENTS UNDER PRESSURE.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects

Routes of Entry Dermal contact. Inhalation.

Eyes Contact may cause eye irritation. Inflammation of the eye is characterized by redness, watering and itching.

Skin Direct contact may cause irritation and redness. Skin inflammation is characterized by itching, scaling, or reddening. Product may be dermal absorbed. Defatting properties, may aggravate an existing dermatitis

Inhalation Avoid breathing vapors, spray or mists. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system (CNS) depression. High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Ingestion Harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage. Vomiting increases risk of chemical pneumonia or pulmonary edema caused by aspiration of hydrocarbon solvents.

Chronic effects

Overexposure of this product by inhalation or absorption can produce central nervous system depression resulting in headache, nausea and/or dizziness. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Repeated or prolonged exposure to the substance can produce damage to kidneys, lungs, liver, heart, brain, central nervous system (CNS).

Carcinogenicity

Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Product/ingredient name

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
HEPTANE; n-heptane	142-82-5	60 - 70
BLEND OF ISOBUTANE & PROPANE	74-98-6; 75-28-5	25 - 35

Section 4. First Aid Measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Skin Contact Immediately wash with water and soap and rinse thoroughly. Get medical attention if irritation develops.

Inhalation Move exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion ASPIRATION HAZARD. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)

Flash Point Closed cup: <-18°C (<0°F) (Tagliabue.)

Flammable Limits Lower: 1.2%
Upper: 6.7%

Flammability Extremely flammable. (CSMA) Aerosol that may flash back.

Fire hazard FLAMMABLE LIQUID AND VAPOR. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Fire-Fighting Procedures Use dry chemical or CO_2. Fire-fighters should wear appropriate protective equipment. Cool containers with water jet in order to prevent pressure build-up, auto-ignition or explosion.

Section 6. Accidental Release Measures

Spill Clean up Large spills are unlikely due to packaging.

Section 7. Handling and Storage

Handling Extremely flammable liquid and vapor. Store and use away from heat, sparks, open flame or any other ignition source. Put on appropriate personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Do not ingest. Wash thoroughly after handling. Wash contaminated clothing before reusing. Observe label precautions.

Storage CONTENTS UNDER PRESSURE. Do not puncture or incinerate. Do not store above the following temperature: 49°C (120.2°F). Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
HEPTANE; n-heptane	**ACGIH/OSHA (United States).** TWA: 400 ppm 8 hour(s). **ACGIH/OSHA (United States).** STEL: 400 ppm 15 minute(s).
BLEND OF ISOBUTANE & PROPANE	**ACGIH TLV (United States).** TWA: 800 ppm 8 hour(s). **OSHA PEL (United States).** TWA: 1000 ppm 8 hour(s).

Personal Protective Equipment (PPE)

Eyes Safety glasses.

Body Wear appropriate protective clothing to prevent skin contact. Recommended Viton gloves. Nitrile gloves. Neoprene gloves.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate.

Section 9. Physical and Chemical Properties

Physical State Liquid. [Aerosol.]
pH Not applicable
Boiling Point Not determined.
Specific Gravity 0.69
Solubility insoluble in water.

Color Clear, Colorless.
Odor Solvent.
Vapor Pressure Not available.
Vapor Density >1 [Air = 1]
Evaporation Rate Not determined.
VOC (Consumer) 95.0% 5.43 (lb/gal) 651 (g/l).

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Keep away from heat, sparks and flame. Reactive or incompatible with the following materials: oxidizing materials.

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products carbon oxides (CO, CO_2)

Section 11. Toxicological Information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Heptane	LD50 Oral	Mouse	15000 mg/kg	-
	LC50 Inhalation Gas.	Mouse	18295 ppm	2 hours

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Not available.

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: D001
Classification: - [Hazardous waste.]
Origin: - [RCRA waste.]

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	None.	Consumer commodity	ORM-D	-	
IMDG Class	Not determined.			I	

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.
PG* : Packing group

Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:

Product name

No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations

California Prop 65

WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. : Toluene

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.*