

Maint



GOJO INDUSTRIES, INC.

P.O. BOX 991, Akron, OH 44309-0991

65180704

#527

MATERIAL SAFETY DATA SHEET

TELEPHONE: (216) 220-3100 EXT 352 EMERGENCY: 1-800-321-9647 EXT 242

HEMTREC (PUBLIC EMERGENCY): 1-800-424-9300

LOCK NO.: 1805/1807/1809

HMIS RATING	
Health	1
Flammability	0
Reactivity	0
Personal Protection	NA

PRODUCT: ALL PURPOSE LOTION SOAP

HAZARDOUS (OR OTHER) INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
(Chloroxyleneol)	88-04-0	NE	NE	0.45
(Water)	7732-18-5	NA	NA	>70
(Sodium Laureth Sulfate)	9004-82-4	NA	NA	<10
(Cocamidopropyl Betaine)	61789-40-0	NA	NA	<7
(Cocamide)	68140-00-1	NA	NA	<6
(Propylene Glycol)	57-55-6	NA	NA	<1
(Aloe Extract)	8001-97-6	NA	NA	<1
(Citric Acid)	77-92-9	NA	NA	<1
(EDTA)	60-00-4	NA	NA	<1
(Tocopheryl Acetate)	58-95-7	NA	NA	<1
(Triclosan)	3380-34-5	NA	NA	<1
(D&C Red #33)	3567-66-6	NA	NA	<1

A 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 REGULATIONS.

HEALTH HAZARD DATA: THIS SKIN CARE COSMETIC IS NOT HAZARDOUS OR TOXIC UNDER NORMAL USE CONDITIONS.

UTES OF ENTRY: ☐ Inhalation ☐ Skin ☒ Eye ☐ Ingestion

REPRODUCTIVE TOXICITY: ☒ Not Listed ☐ NTP ☐ IARC ☐ OSHA ☐ ACGIH

EXPOSURE: Medical Conditions Aggravated; None Known Potential Effects: May cause eye irritation

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 center.

FIRE FIGHTING OR EXPLOSION DATA:	Flash Point, °F/C: (PMCC Method) NA	Flammability LEL, % Limits: UEL, % NA
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EXTINGUISHING MEDIA: ☒ Water Fog ☒ Alcohol Foam ☒ CO₂ ☒ Dry Chemical ☐ Other

Special Fire and Explosion Hazards: None Known

Special Fire Fighting Procedures: None Known NFPA 704 Rating: 0 0 0 0

ACCIDENTAL RELEASE MEASURES: NOT REPORTABLE UNDER CERCLA OR SARA TITLE III SECTION 304.

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.

PRECAUTIONS FOR SAFE HANDLING AND USE: STORE AWAY FROM THE REACH OF SMALL CHILDREN

PERSONAL PRECAUTIONS: Avoid contact with eyes. Do not take internally.

STORAGE AND OTHER PRECAUTIONS: Store at ambient indoor conditions. Keep containers sealed.

CONTROL AND PROTECTION MEASURES: COMPLY IF APPLICABLE EXPOSURE LIMITS SHOWN IN SECTION 2 ABOVE.

ACGIH: Not Applicable PEL (OSHA): Not Applicable TWA: None STEL: None Skin Note: Not Applicable

EXPOSURE: 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



Material Safety Data Sheet

The Dow Chemical Company

Product Name: AQUACAR(TM) GA 15 Water Treatment
Microbiocide

Issue Date: 08/16/2013

Print Date: 14 Feb 2014

The Dow Chemical Company 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
AQUACAR™ GA 15 Water Treatment Microbiocide

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
United States

Customer Information Number:

800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview

Color: Clear

Physical State: Liquid.

Odor: Fruity

Hazards of product:

DANGER! Keep out of reach of children. Causes severe eye burns. Causes skin burns. May cause allergic skin reaction. Harmful if inhaled; heated material produces harmful vapors. Causes respiratory tract irritation. May be harmful if swallowed. Aspiration hazard. Can enter lungs and cause damage. Evacuate area. Keep upwind of spill. 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 severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin Contact: Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Skin Sensitization: Skin contact may cause an allergic skin reaction in a small proportion of individuals. Contains component(s) which have caused allergic skin sensitization in guinea pigs. Contains component(s) which have demonstrated the potential for contact allergy in mice.

Inhalation: Vapor may cause severe irritation of the upper respiratory tract (nose and throat). Vapor from heated material may cause serious adverse effects, even death. Case reports and medical surveys link asthma and respiratory irritation to glutaraldehyde exposure, primarily in medical personnel. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening. Asthma-like symptoms may occur in people prone to respiratory disorders or other allergies.

Respiratory Sensitization: May cause allergic respiratory response in a small proportion of individuals.

Ingestion: Low toxicity if swallowed. Swallowing may result in irritation or burns of the mouth, throat, and gastrointestinal tract. Swallowing may result in gastrointestinal irritation or ulceration. Excessive exposure may cause: Headache. Dizziness. Anesthetic effects. Drowsiness. Unconsciousness. Other central nervous system effects.

Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

Effects of Repeated Exposure: Repeated skin contact may result in absorption of amounts which could cause death. May cause nausea and vomiting.

Birth Defects/Developmental Effects: For glutaraldehyde: Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

3. Composition Information

Component	CAS #	Amount
Glutaraldehyde	111-30-8	15.0 %
Water	7732-18-5	<= 85.0 %

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. If breathing is difficult, oxygen should be administered by qualified personnel.

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 immediately available.

Eye Contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If the person is fully alert and cooperative, have the person rinse mouth with plenty of water. In cases of ingestion have the person drink 4 to 10 ounces (120-300 mL) of water. Do not induce vomiting. Do not attempt mouth rinse if the person has respiratory distress, altered mental

status, or nausea and vomiting. Call a physician and/or transport to emergency facility immediately. See "Indication of immediate medical attention and special treatment needed".

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

Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Glutaraldehyde may transiently worsen reversible airways obstruction including asthma or reactive airways disease. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Probable mucosal damage may contraindicate the use of gastric lavage. 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.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. Fire Fighting Measures

Suitable extinguishing media

To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

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: Carbon monoxide, Carbon dioxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. 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: Evacuate area. Keep upwind of spill. Ventilate area of leak or spill. Only trained and properly protected personnel must be involved in clean-up operations. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Spills or discharge to natural waterways is likely to kill aquatic organisms. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Avoid making contact with spilled material, glutaraldehyde will be absorbed by most shoes. Always wear the correct protective equipment, consisting of splashproof monogoggles, or both safety glasses with side shields and a wraparound full-face shield, appropriate gloves and protective clothing. A self-contained breathing apparatus or respirator and absorbents may be necessary, depending on the size of the spill and the adequacy of ventilation. Small spills: Wear the correct protective equipment and cover the liquid with absorbent material. Collect and seal the material and the dirt that has absorbed the spilled material in polyethylene bags and place in a drum for transit to an approved disposal site. Rinse away the remaining spilled material with water to reduce odor, and discharge the rinsate into a municipal or industrial sewer. Large spills: In case of nasal and respiratory irritation, vacate the room immediately. Personnel cleaning up should be trained and equipped with a self-contained breathing apparatus, or an officially approved or certified full-face respirator equipped with an organic vapor cartridge, gloves, and clothing impervious to glutaraldehyde, including rubber boots or shoe protection. Deactivate with sodium bisulfite (2-3 parts (by weight) per part of active substance glutaraldehyde), collect the neutralized liquid and place in a drum for transit to an approved disposal site.

7. Handling and Storage

Handling

General Handling: Keep out of reach of children. Do not get in eyes, on skin, on clothing. Do not swallow. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Keep container closed. Use with adequate ventilation. Wear goggles, protective clothing and butyl or nitrile gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: Do not spray or aerosolize the undiluted form of the product. Full personal protective equipment (including skin covering and full-face SCBA respirator) is required for dilutions or mixtures of the product used in a spray application.

Storage

Do not store in: Aluminum. Carbon steel. Copper. Mild steel. Iron. Please refer to Dow publication: GLUTARALDEHYDE. Safe Handling and Storage Guide; Form No. 253-01338.

Shelf life: Use within 18 Months

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Glutaraldehyde	ACGIH	Celling	0.05 ppm SEN

A "SEN" notation following the exposure guideline refers to the potential to produce sensitization, as confirmed by human or animal data.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator. Use a full-face respirator when material is heated or when aerosols/mists are generated. Eye wash fountain should be located in immediate work area.

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. Safety shower should be located in immediate work area. Use chemical protective clothing resistant to this material, when there is any possibility of skin contact. Remove contaminated clothing immediately, wash skin area

with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Examples of acceptable glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"). **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: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. This product is a respiratory irritant. If discomfort is experienced ventilation is not adequate and an approved full face air-purifying respirator is recommended. If vapors are strong enough to be irritating to the nose, or eyes, the OEL is probably being exceeded. Special ventilation or respiratory protection may be required. For operations such as spraying and other conditions such as emergencies where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus. For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Full-face 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 engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Appearance

Physical State

Liquid.

Color

Clear

Odor

Fruity

Odor Threshold

< 1 ppb *Literature*

pH

3.1 - 4.5 *ASTM E70*

Melting Point

Not applicable to liquids

Freezing Point

-7 °C (19 °F) *OECD 102*

Boiling Point (760 mmHg)

100.7 °C (213.3 °F) *OECD 103*.

Flash Point - Closed Cup

ASTM D56 None

Evaporation Rate (Butyl

0.8 *Calculated*

Acetate = 1)

Flammability (solid, gas)

Not applicable to liquids

Flammable Limits in Air

Lower: No test data available

Upper: No test data available

Vapor Pressure

0.3 mmHg @ 20 °C *OECD 104* Active ingredient

Vapor Density (air = 1)

0.7 *Calculated*

Specific Gravity (H₂O = 1)

1.042 *OECD 109*

Solubility in water (by weight)

100 % @ 20 °C *Calculated*

Partition coefficient, n-octanol/water (log Pow)

No data available for this product. See Section 12 for individual component data.

Autoignition Temperature

No test data available

Decomposition

No test data available

Temperature

Kinematic Viscosity

No test data available

Explosive properties

Not explosive

Oxidizing properties

No

Molecular Weight

No test data available

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.

Incompatible Materials: Avoid contact with: Amines. Ammonia. Strong acids. Strong bases. Strong oxidizers. Avoid contact with metals such as: Aluminum. Carbon steel. Copper. Iron. Mild steel.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined. Typical for this family of materials. LD50, rat > 900 mg/kg

Dermal

The dermal LD50 has not been determined. Typical for this family of materials. LD50, rabbit > 16,000 mg/kg

Inhalation

As product: The LC50 has not been determined.

Eye damage/eye irritation

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin corrosion/irritation

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Sensitization

Skin

Skin contact may cause an allergic skin reaction in a small proportion of individuals. Contains component(s) which have caused allergic skin sensitization in guinea pigs. Contains component(s) which have demonstrated the potential for contact allergy in mice.

Respiratory

May cause allergic respiratory response in a small proportion of individuals.

Repeated Dose Toxicity

Repeated skin contact may result in absorption of amounts which could cause death. May cause nausea and vomiting.

Chronic Toxicity and Carcinogenicity

In a NTP chronic 2-year inhalation study on glutaraldehyde, no carcinogenicity was seen in rats or in mice. An increase in large granular lymphocytes in Fischer rats dosed with glutaraldehyde for two years was random or a secondary carcinogenic effect due to a modifying influence on the occurrence of this common neoplasm in this rat strain.

Developmental Toxicity

For glutaraldehyde: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For glutaraldehyde: Did not cause birth defects in laboratory animals.

Reproductive Toxicity

For glutaraldehyde: In animal studies, did not interfere with reproduction.

Genetic Toxicology

For glutaraldehyde: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative.

12. Ecological Information

Toxicity

Data for Component: Glutaraldehyde

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 moderately toxic to birds on an acute basis (LD50 between 51 and 500 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

Fish Acute & Prolonged Toxicity

For the active ingredient(s): LC50, *Pimephales promelas* (fathead minnow), 96 h: 5.4 mg/l

Aquatic Invertebrate Acute Toxicity

For the active ingredient(s): LC50, *Daphnia magna* (Water flea), 48 h, immobilization: 0.345 mg/l

Aquatic Plant Toxicity

For the active ingredient(s): ErC50, *Pseudokirchneriella subcapitata* (green algae), Growth rate inhibition, 72 h: 1.32 mg/l

Toxicity to Micro-organisms

EC50, OECD 209 Test; activated sludge: > 50 mg/l

EC50; Bacteria, 16 h: 17 - 25 mg/l

Aquatic Invertebrates Chronic Toxicity Value

water flea *Daphnia magna*, flow-through test, 21 d, number of offspring, For the active ingredient(s); NOEC: 0.12 mg/l

Toxicity to Above Ground Organisms

oral LD50, *Anas platyrhynchos* (Mallard duck): 408 - 466 mg/kg

dietary LC50, *Colinus virginianus* (Bobwhite quail): > 5,000 ppm

dietary LC50, *Anas platyrhynchos* (Mallard duck): > 5,000 ppm

Persistence and Degradability

Data for Component: Glutaraldehyde

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
83 %	28 d	OECD 301A Test	pass
73 %	28 d	OECD 306 Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
4.69E-11 cm ³ /s	2.74 h	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
28 %	57 - 63 %	72 - 74 %	

Theoretical Oxygen Demand: 1.92 mg/mg

Bioaccumulative potential

Data for Component: Glutaraldehyde

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -0.333 Measured

Mobility in soil

Data for Component: Glutaraldehyde

Mobility in soil: Potential for mobility in soil is high (Koc between 50 and 150)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient, soil organic carbon/water (Koc): 120 - 500 Estimated.

Henry's Law Constant (H): 3.3E-08 atm*m3/mole; 25 °C Measured

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices 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 responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. Transport Information

DOT Non-Bulk

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, NOS

Technical Name: GLUTARALDEHYDE

Hazard Class: 8 **ID Number:** UN3265 **Packing Group:** PG III

DOT Bulk

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, NOS

Technical Name: GLUTARALDEHYDE

Hazard Class: 8 **ID Number:** UN3265 **Packing Group:** PG III

IMDG

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, NOS

Technical Name: GLUTARALDEHYDE

Hazard Class: 8 **ID Number:** UN3265 **Packing Group:** PG III

EMS Number: F-A,S-B

ICAO/IATA

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, NOS

Technical Name: GLUTARALDEHYDE

Hazard Class: 8 **ID Number:** UN3265 **Packing Group:** PG III

Cargo Packing Instruction: 856

Passenger Packing Instruction: 852

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	No
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.

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
Glutaraldehyde	111-30-8	<= 15.0 %

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.

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.

US, Toxic Substances Control Act

This product contains chemical substance(s) exempt from TSCA Inventory requirements. It is sold solely for use as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	3	1	0

Recommended Uses and Restrictions

Identified uses

For biocidal applications. For industrial use only.

Revision

Identification Number: 1016774 / 1001 / Issue Date 08/16/2013 / Version: 6.0

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.

The Dow Chemical Company 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.



Cooling Tower (Event Storage)

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830

SAFETY DATA SHEET

Alphi 11 5Ltrs

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

1.1 Product identifier

Product name : Alphi 11 5Ltrs
Product code : 61033
Product description : Not available.
Product type : Liquid.

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

Restricted to professional users.

Material uses : Water-boiler treatment.

1.3 Details of the supplier of the safety data sheet

Supplier : Fernox
2 Genesis Business Park
Albert Drive
Sheerwater
Woking GU21 5RW
Information contact : +44 (0) 330 100 7750
+44 (0) 330 100 7751
europeanregulatory@macdermid.com

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 330 100 7750
Hours of operation : 24/7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Ingredients of unknown toxicity :

Ingredients of unknown ecotoxicity :

Classification according to Directive 1999/45/EC [DPD]

Europe

SECTION 2: Hazards identification

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.

See Section 16 for the full text of the R phrases or H statements declared above.

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

2.2 Label elements

Hazard pictograms :

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.

Hazardous ingredients :

Supplemental label elements : Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	<u>Classification</u>		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Croatia propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≥90	Not classified.	Not classified.	-
Ireland propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≥90	Not classified.	Not classified.	[2]
Latvia propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≥90	Not classified.	Not classified.	[2]
Lithuania propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≥90	Not classified.	Not classified.	[2]
Norway					

SECTION 3: Composition/information on ingredients

propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≥90	Not classified.	Not classified.	[2]
United Kingdom (UK) propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≥90	Not classified.	Not classified.	[2]

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.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

SECTION 4: First aid measures**4.1 Description of 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.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both 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.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special precautions 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 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 spilt 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".

6.2 Environmental precautions

: Avoid dispersal of spilt 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).

6.3 Methods and material 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. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 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.

7.2 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Europe No exposure limit value known. Austria No exposure limit value known. Belgium No exposure limit value known. Bulgaria No exposure limit value known. Croatia propane-1,2-diol Czech Republic No exposure limit value known. Denmark No exposure limit value known. Estonia No exposure limit value known. Finland No exposure limit value known.	MinGoRP GVI/KGVI (Croatia, 6/2013). ELV: 10 mg/m ³ 8 hours. Form: particulates ELV: 474 mg/m ³ 8 hours. Form: total vapour and particulates ELV: 150 ppm 8 hours.

SECTION 8: Exposure controls/personal protection**France**

No exposure limit value known.

Germany

No exposure limit value known.

Greece

No exposure limit value known.

Hungary

No exposure limit value known.

Ireland

propane-1,2-diol

NAOSH (Ireland, 12/2011).OELV-8hr: 10 mg/m³ 8 hours. Form: particulateOELV-8hr: 470 mg/m³ 8 hours. Form: vapour and particulates

OELV-8hr: 150 ppm 8 hours. Form: vapour and particulates

Italy

No exposure limit value known.

Latvia

propane-1,2-diol

Ministru kabineta - AER (Latvia, 2/2011).TWA: 7 mg/m³ 8 hours.**Lithuania**

propane-1,2-diol

Lietuvos Higienos Normos HN 23 (Lithuania, 10/2007).TWA: 7 mg/m³ 8 hours.**Netherlands**

No exposure limit value known.

Norway

propane-1,2-diol

FOR-2011-12-06-1358 (Norway, 1/2013).TWA: 79 mg/m³ 8 hours.

TWA: 25 ppm 8 hours.

Poland

No exposure limit value known.

Portugal

No exposure limit value known.

Romania

No exposure limit value known.

Slovakia

No exposure limit value known.

Slovenia

No exposure limit value known.

Spain

No exposure limit value known.

Sweden

No exposure limit value known.

Switzerland

No exposure limit value known.

Turkey

No exposure limit value known.

United Kingdom (UK)

SECTION 8: Exposure controls/personal protection

propane-1,2-diol

EH40/2005 WELs (United Kingdom (UK), 12/2011).TWA: 10 mg/m³ 8 hours. Form: ParticulateTWA: 474 mg/m³ 8 hours. Form: Sum of vapour and particulates

TWA: 150 ppm 8 hours. Form: Sum of vapour and particulates

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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 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.

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. Recommended: 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 8: Exposure controls/personal protection

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.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

Physical state : Liquid.
Colour : Colourless.
Odour : Aromatic. [Slight]
pH : 6.9 [Conc. (% w/w): 100%]
Melting point/freezing point : Not available.
Initial boiling point and boiling range : Not available.
Flash point : [Product does not sustain combustion.]
Upper/lower flammability or explosive limits : Not available.
Relative density : 1.04
Solubility(ies) : Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/ water : Not available.
Auto-ignition temperature : Not available.
:
VOC content 95.9 % (w/w)

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Conclusion/Summary : Not available.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : No specific data.

Skin contact : No specific data.

Eye contact : No specific data.

Delayed and immediate effects as well as 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.

SECTION 11: Toxicological information

Conclusion/Summary	: 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.
Other information	: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary	: Not available.
---------------------------	------------------

12.2 Persistence and degradability

Conclusion/Summary	: Not available.
---------------------------	------------------

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc})	: Not available.
Mobility	: Not available.

12.5 Results of PBT and vPvB assessment

PBT	: Not applicable.
vPvB	: Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal	: The generation of waste should be avoided or minimised 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.
Hazardous waste	: Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

European waste catalogue (EWC)

Waste code	Waste designation
16 03 06	organic wastes other than those mentioned in 16 03 05

Packaging

SECTION 13: Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.
Additional information	-	-	-

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Europe inventory : Not determined.

National regulations

Austria

Belgium

Bulgaria

SECTION 15: Regulatory information

CroatiaCzech RepublicDenmarkEstoniaFinlandFranceGermany

Hazard class for water : nwg Appendix No. 4

GreeceHungaryIrelandItalyLatviaLithuaniaNetherlandsNorwayPolandPortugalRomaniaSlovakiaSloveniaSpainSwedenSwitzerlandTurkeyUnited Kingdom (UK)

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Date of printing 10.12.2016

Date of issue/ Date of revision : 30.11.2016

Date of previous issue : 29.11.2016

Version : 2.12

Notice to reader

☑ Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Europe

Full text of abbreviated H statements : Not applicable.

Full text of classifications [CLP/GHS] : Not applicable.

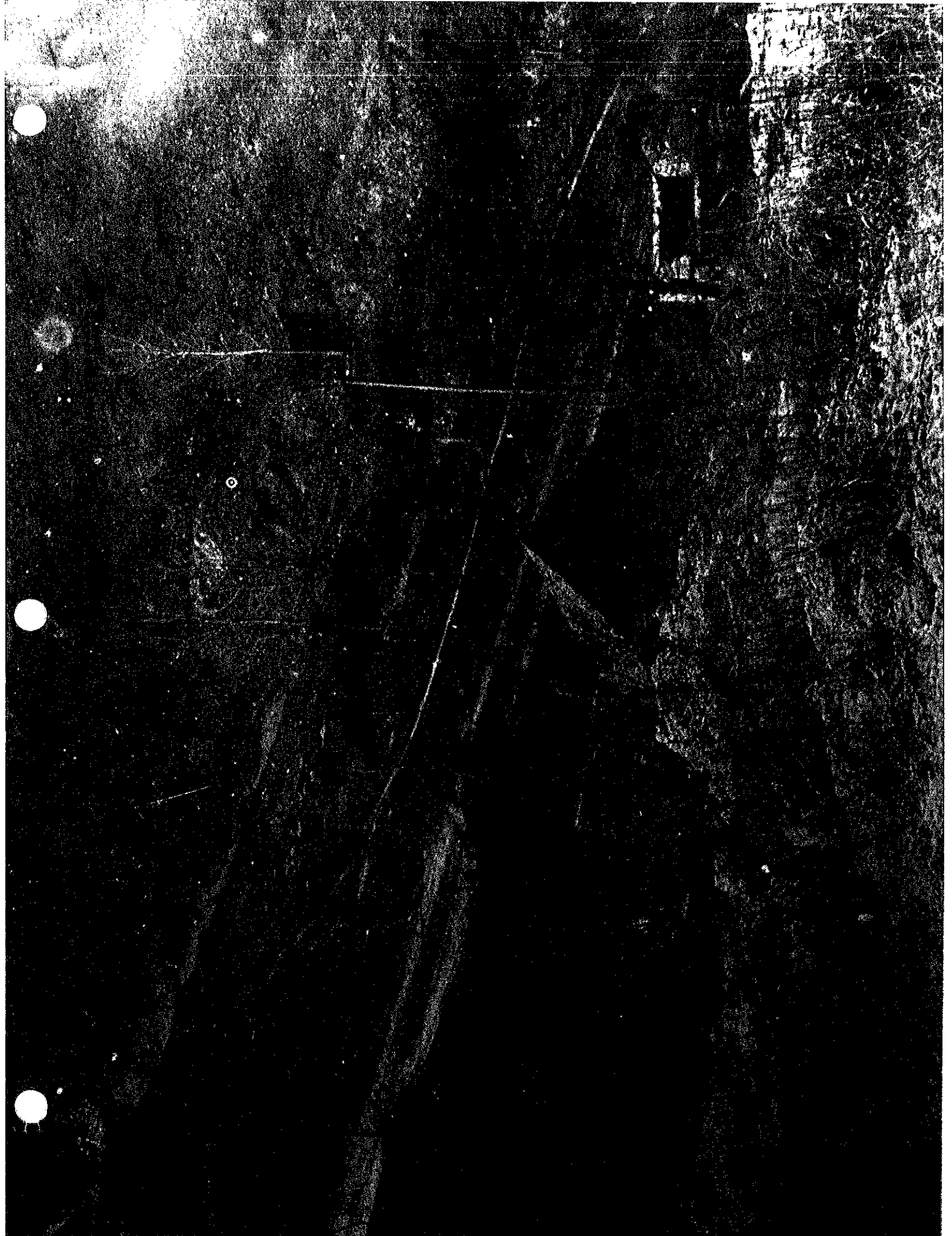
Full text of abbreviated R phrases : Not applicable.

Full text of classifications [DSD/DPD] : Not applicable.

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.

Fernox SDS CLP Europe



MATERIAL SAFETY DATA SHEET

63
18 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

63

HMIS CODES

Health	2*
Flammability	0
Reactivity	0

PRODUCT NAME

BLOX-IT 2* Universal Primer, White

MANUFACTURER'S NAME

MAUTZ PAINT CO.

939 E. Washington Ave.

Madison, WI 53707

DATE OF PREPARATION

22-OCT-06

EMERGENCY TELEPHONE NO.

(216) 566-2917

INFORMATION TELEPHONE NO.

(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
1	107-21-1	Ethylene Glycol		
		ACGIH TLV	100	mg/m3 CEILI (aerosol) 0.12 mm
		OSHA PEL	50	ppm CEILING
0.4	14464-46-1	Cristobalite		
		ACGIH TLV	0.05	mg/m3 as Resp. Dust
		OSHA PEL	0.05	mg/m3 as Resp. Dust
3	14807-96-6	Talc		
		ACGIH TLV	2	mg/m3 as Resp. Dust
		OSHA PEL	2	mg/m3 as Resp. Dust
17	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

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.

Continued on page 2

=====
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
Not Applicable	N.A.	N.A.

FLAMMABILITY CLASSIFICATION
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).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

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	11.13 lb/gal	1333 g/l
SPECIFIC GRAVITY	1.34	
BOILING POINT	212 - 500 F	100 - 260 C
MELTING POINT	Not Available	
VOLATILE VOLUME	64 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	8.7	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical - As Packaged)	
0.81 lb/gal	97 g/l	Less Water and Federally Exempt Solvents
0.32 lb/gal	38 g/l	Emitted VOC

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

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.

Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

=====

TOXICOLOGY DATA

CAS No.	Ingredient Name				
107-21-1	Ethylene Glycol	LC50	RAT	4HR	Not Available
		LD50	RAT		4700 mg/kg
14464-46-1	Cristobalite	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14807-96-6	Talc	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 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
=====

No data available.

=====

Section 15 -- REGULATORY INFORMATION
=====-----
SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
107-21-1	Ethylene Glycol	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

Section 1: Product & Company Identification

Product Name: Brakleen® Brake Parts Cleaner (aerosol)

Product Number (s): 05089, 05089T, 85089, 85089AZ

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-8963
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Colorless liquid, irritating odor at high concentrations

DANGER

Vapor Harmful. Contents Under Pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE:	May cause slight temporary eye irritation. Vapors may irritate the eyes at concentrations of 100 ppm.
SKIN:	Short single exposure may cause skin irritation. Prolonged exposure may cause severe skin irritation, even a burn. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.
INHALATION:	Dizziness may occur at concentrations of 200 ppm. Progressively higher levels may also cause nasal irritation, nausea, incoordination, and drunkenness. Very high levels or prolonged exposure could lead to unconsciousness and death.
INGESTION:	Single dose oral toxicity is considered to be extremely low. Swallowing large amounts may cause injury if aspirated into the lungs. This may be rapidly absorbed through the lungs and result in injury to other body systems.
CHRONIC EFFECTS:	Repeated contact with skin may cause drying or flaking of skin. Excessive or long term exposure to vapors may increase sensitivity to epinephrine and increase myocardial irritability.
TARGET ORGANS:	Central nervous system. Possibly liver and kidney.

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Product Name: Brakleen® Brake Parts Cleaner (aerosol)
Product Number (s): 05089,05089T, 85089, 85089AZ

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Tetrachloroethylene (PERC)	127-18-4	> 95
Carbon Dioxide	124-38-9	< 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 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. Call a physician immediately.

Note to Physicians: Because rapid absorption may occur through lungs if aspirated and cause systemic effects, 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. If burn is present, treat as any thermal burn, after decontamination. Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable.

Flash Point:	None (TCC)	Upper Explosive Limit:	None
Autoignition Temperature:	None	Lower Explosive Limit:	None

Suitable Extinguishing Media: This material does not burn. Use extinguishing agent suitable for surrounding fire.

Products of Combustion: Hydrogen chloride. Trace amounts of phosgene, and chlorine.

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. Do not breathe vapors.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush

Product Name: Brakleen® Brake Parts Cleaner (aerosol)

Product Number (s): 05089,05089T, 85089, 85089AZ

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: Vapors of this product are heavier than air and will collect in low areas. Make sure ventilation removes vapors from low areas. Do not eat, drink or smoke while using this product.

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:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURC E	
Tetrachloroethylene	100	N.E.	25	100	N.E.		ppm
Carbon dioxide	5000	30000 v	5000	30,000	N.E.		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation of vapors. Provide proper exhaust to remove vapors from low areas. 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. Use NIOSH-approved self-contained positive pressure respirators in low circulation areas 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 PVA, Teflon or 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: colorless

Odor: irritating odor

Specific Gravity: 1.619

Product Name: Brakleen® Brake Parts Cleaner (aerosol)

Product Number (s): 05089,05089T, 85089, 85089AZ

Initial Boiling Point: 250 F

Freezing Point: ND

Vapor Pressure: 13 mmHg @ 68 F

Vapor Density: 5.76 (air = 1)

Evaporation Rate: > 1 (ether = 1)

Solubility: 0.015 g/ 100 g @ 77 F in water

pH: NA

Volatile Organic Compounds: wt %: 0 g/L: 0 lbs./gal: 0

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Avoid direct sunlight or ultraviolet sources. Avoid open flames, welding arcs, and other high temperature sources which induce thermal decomposition.

Incompatible Materials: Avoid contact with metals such as: aluminum powders, magnesium powders, potassium, sodium, and zinc powder. Avoid unintended contact with amines. Avoid contact with strong bases and strong oxidizers.

Hazardous Decomposition Products: Hydrogen chloride, trace amounts of chlorine and phosgene

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 EFFECTS

<u>Component</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
tetrachloroethylene	LD50	> 10 g/kg	dermal	rabbit
tetrachloroethylene	LD50	2629 mg/kg	oral	rat
tetrachloroethylene	LC50	5200 mg/kg/4H	inhalation	mouse

CHRONIC EFFECTS

Carcinogenicity:

	<u>Component</u>	<u>Result</u>
OSHA:	Tetrachloroethylene	Hazard communication carcinogen
IARC:	Tetrachloroethylene	2A (Probably carcinogenic)
NTP:	Tetrachloroethylene	Reasonably anticipated to be a carcinogen

Mutagenicity: tetrachloroethylene
in vitro studies were negative
animal studies were negative

Other: None

Section 12: Ecological Information

Ecotoxicity: Tetrachloroethylene -- 96 Hr LC50 Rainbow Trout: 5.28 mg/L (static)

Product Name: Brakleen® Brake Parts Cleaner (aerosol)

Product Number (s): 05089,05089T, 85089, 85089AZ

Persistence / Degradability: 96 Hr LC50 Fathead minnow: 13.4 mg/L (flow-through)
Biodegradation under aerobic conditions is below detectable limits.
Biodegradation may occur under anaerobic conditions. Biodegradation rate may increase in soil and/or water with acclimation.

Bioaccumulation / Accumulation: Bioconcentration potential is low (BCF less than 100).

Mobility in Environment: Potential for mobility in soil is medium.

Section 13: Disposal Considerations

Disposal: The dispensed liquid product is a RCRA hazardous waste for toxicity with the following potential waste codes: U210, F001, F002, D039. (See 40 CFR Part 261.20 – 261.33)
Aerosol containers should be emptied and depressurized before disposal. Empty containers may be recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground): Consumer Commodity, ORM-D

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal

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: Tetrachloroethylene (100 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	Yes

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:
tetrachloroethylene (97.7%)

Product Name: Brakleen® Brake Parts Cleaner (aerosol)

Product Number (s): 05089,05089T, 85089, 85089AZ

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): tetrachloroethylene

State Regulations

State Right to Know:

New Jersey: tetrachloroethylene, carbon dioxide

Pennsylvania: tetrachloroethylene, carbon dioxide

Massachusetts: tetrachloroethylene, carbon dioxide

Rhode Island : tetrachloroethylene, carbon dioxide

Additional Regulatory Information: Not for Use in California.

Section 16: Other Information

NFPA:	Health: 2	Flammability: 0	Reactivity: 0	
HMIS:	Health: 2	Flammability: 0	Reactivity: 0	PPE: B

Prepared By: Michelle Rudnick

CRC #: 491G

Revision Date: August 7, 2006

Changes since last revision: Section 13 waste code revised

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.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
PMCC:	Pensky-Martens Closed Cup	g/L:	grams per Liter
PPE:	Personal Protection Equipment	lbs./gal:	pounds per gallon
TWA:	Time Weighted Average	STEL:	Short Term Exposure Limit
OSHA:	Occupational Safety and Health Administration		
ACGIH	American Association of Governmental Industrial Hygienists		
NIOSH	National Institute of Occupational Safety & Health		



Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	BRASSO® MULTI-PURPOSE METAL POLISH	MSDS#	Not available.
Product Description	Multi-purpose metal polish for cleaning and polishing brass, pewter, chrome, copper and stainless steel.	Validation Date	3/24/2005
Manufacturer	Reckitt Benckiser North America, Inc. Morris Corporate Center IV 399 Interpace Parkway (P.O. Box 225) Parsippany, N.J. 07054-0225	Print Date	3/24/2005
Product Identifier	Not available.	In case of Emergency:	Telephone: 800-228-4722
Item Number	0024708	Transportation Emergencies:	Chemtrec: 1-800-424-9300 (U.S. & Canada) Outside the U.S & Canada (North America), call: 703-527-3887
Formula Number	1341-014 (0024708)		
UPC Number	26600-06200 (8 oz.); 26600-76523 (8 oz.); 26600-05315 (1 gal.).		

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
1) PETROLEUM DISTILLATE (STODDARD SOLVENT)	8052-41-3	25-30	TWA: 525 (mg/m ³) from ACGIH (TLV) [United States] TWA: 100 (ppm) from ACGIH (TLV) [United States] TWA: 2900 (mg/m ³) from OSHA (PEL) [United States] TWA: 500 (ppm) from OSHA (PEL) [United States]
2) DESULFURIZED PETROLEUM DISTILLATE	64742-81-0	30-35	Not available.
3) SILICA, CRYSTALLINE	14808-60-7	9-12	TWA: 0.1 (mg/m ³) from ACGIH (TLV) [United States] Respirable. TWA: 0.3 (mg/m ³) from OSHA (PEL) [United States] Respirable.
4) KAOLIN	1332-58-7	10-15	TWA: 5 (mg/m ³) from OSHA (PEL) [United States] Respirable. TWA: 15 (mg/m ³) from OSHA (PEL) [United States] Total Dust. TWA: 2 (mg/m ³) from ACGIH (TLV) [United States] Respirable.
5) OLEIC ACID	112-80-1	7-10	Not available.
6) AMMONIUM HYDROXIDE	1336-21-6	2-3	Not available.

Section 3. Hazards Identification

Emergency Overview	<p>DANGER: HARMFUL OR FATAL IF SWALLOWED. EYE AND SKIN IRRITANT. VAPORS HARMFUL IF INHALED. COMBUSTIBLE. Do not ingest. DO NOT inhale. DO NOT breathe dust from dried product. Use product in a well ventilated area. Keep away from heat, sparks and flame. Keep container closed when not in use. Contains petroleum distillates and silica.</p> <p>KEEP OUT OF REACH OF CHILDREN.</p>
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Continued on Next Page

**BRASSO® MULTI-PURPOSE METAL
POLISH**

Page Number: 2

Section 4. First Aid Measures

Eye Contact	Immediately rinse eyes with water, remove any contact lenses, and continue rinsing eyes for fifteen minutes. Call a doctor or poison control center if symptoms persist.
Skin Contact	In case of skin contact, wash skin thoroughly with soap and water. If irritation persists, consult a physician.
Inhalation	Remove to fresh air. If irritation persists or there is any trouble breathing, get immediate medical attention.
Ingestion	If swallowed, DO NOT induce vomiting! Rinse mouth with water. IMMEDIATELY contact a physician or poison control center. NEVER give an unconscious person anything to ingest.

Section 5. Fire and Explosion Data

Flammability	Combustible. See Section 14 for any Shipping Classifications.
Flash Point	CLOSED CUP: 41.5°C (106.7°F). (Setaflash.)
Explosive Limits in Air	Not available.
Products of Combustion	Not available.
Fire and Explosion Hazards	Keep away from heat, sparks or open flame.
Fire Fighting Media and Instructions	Use water fog, foam, dry chemical or carbon dioxide. Product will float and can be reignited on surface of water.
Special Fire Fighting Instructions	The use of a direct stream of water can spread burning liquid. Wear self-contained breathing apparatus and full 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. Wipe surface residue with dry paper towels and discard into trash. Large spills should be diked, contained and collected for later disposal according to local, state or federal regulations.
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Section 7. Handling and Storage

Handling and Storage	DANGER: HARMFUL OR FATAL IF SWALLOWED. EYE AND SKIN IRRITANT. VAPORS HARMFUL IF INHALED. COMBUSTIBLE. Do not ingest. DO NOT inhale. DO NOT breathe dust from dried product. Use product in a well ventilated area. Keep away from heat, sparks and flame. Keep container closed when not in use. Contains petroleum distillates and silica. Store in an area inaccessible to children and pets. Close container after each use. KEEP OUT OF REACH OF CHILDREN.
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Section 8. Exposure Controls/Personal Protection

Ventilation Requirements	None normally required. Use sufficient ventilation to keep hazardous ingredients below their Threshold Limit Values (see Section #2) during major spills, clean-up or fire operations.
Eye Protection	Avoid contact with eyes. Emergency responders should wear full eye and face protection.
Skin Protection	None required under normal use conditions. May cause mild skin irritation after prolonged or repeated use. Emergency responders should wear impermeable gloves.
Respiratory Protection	None required.
Other Protection	None required under normal use conditions. Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
Work/Hygienic Practices	Wash thoroughly with soap and water after handling.

Continued on Next Page

**BRASSO® MULTI-PURPOSE METAL
POLISH**

Page Number: 3

Section 9. Physical and Chemical Properties

Description	Liquid. (Slightly viscous. Opaque liquid.)	Odor	Ammoniacal.
pH	Not applicable.	Color	Beige to Tan. (Light)
Boiling/Condensation Point	82.22 - 93.33° C (180 - 200° F)		
Specific Gravity	0.97 (Water = 1)		
Vapor Pressure	Not available.		
Vapor Density	Not available.		
Viscosity	Not available.		
Solubility	Insoluble.		
Physical Chemical Comments	Not available.		

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	Keep away from heat and open flame.
Incompatibility with Various Substances	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide and unidentified organic compounds.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information**Exposure effects**

Eye Contact	Eye irritant.
Skin Contact	Skin irritant.
Inhalation	Harmful if inhaled.
Ingestion	May be harmful or fatal if swallowed.
Carcinogenicity	Respirable crystalline silica is designated as an IARC Group 1 carcinogen, NTP suspect carcinogen and OSHA suspect carcinogen. However, the silica present in this product is not in a respirable form, when used according to label directions.

Section 12. Ecological Information

Ecotoxicity	Not available.
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Continued on Next Page

**BRASSO® MULTI-PURPOSE METAL
POLISH**

Page Number: 4

Section 13. Disposal Considerations

Waste Disposal Dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

DOT Classification	Not regulated (Non Bulk Road / Rail) see 49 CFR 173.150 (f) (2) (3).	
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	IMDG / IMO: See IMDG Code and EMS = F-E, S-E. ICAO / IATA: See DG List.	
TDG Classification	Not regulated (Non Bulk Road / Rail) see TDG Part 2.17.2 & Part 23.2.	
ADR Classification	Not applicable.	
IMDG Classification	UN 1993, Flammable Liquid, N.O.S. (Petroleum Distillate), Class 3, PG III, Limited Quantity.	
IATA Classification	UN 1993, Flammable Liquid, N.O.S. (Petroleum Distillate), Class 3, PG III	

Section 15. Regulatory Information

Federal and State Regulations	SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting:			
	1) AMMONIUM HYDROXIDE	Not available.	2-3	Not available
	California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act:			
	1) SILICA, CRYSTALLINE	Not available.	10.5	Not available
Other Classifications	WHMIS (Canada) Not a WHMIS controlled product.			

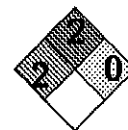
Section 16. Other Information

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	2
Reactivity	0
Personal Protection	B

National Fire Protection
Association (U.S.A.)

Health



Fire Hazard

Reactivity

Specific hazard

NFPA Aerosol Level Not applicable.

Validated by Product Safety on 3/24/2005.

Printed 3/24/2005.

Notice to Reader**Continued on Next Page**

**BRASSO® MULTI-PURPOSE METAL
POLISH****Page Number: 5**

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

SECTION 1: IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: BromMax® 7.1

US Patent: No. 7,045,153 B2 / No. 7,455,859 B2 / No. 7,309,503 B2

Description: Water treatment antimicrobial solution.

Manufacturer: ENVIRO TECH CHEMICALS, Inc.
500 Winmoore Way
Modesto, CA 95358

Company's Informational Telephone: 209-581-9576

Company's Transportation Emergency: CHEMTREC US Toll Free 800-424-9300 / International 703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

NFPA 704M / HMIS Rating: 2/2 Health 0/0 Flammability 1/1 Reactivity COR/Other

Emergency Overview:

WARNING: Causes irritation to skin and eyes. Do not get in eyes, on skin, or on clothing. Do not take internally. Keep container closed when not in use. Keep container away from heat and sunlight.

Potential Health Effects:

Primary Route(s) of Exposure: Eye, Skin

Eye Contact: Can cause acute burns and irritation.

Skin Contact: Can cause irritation of various degrees.

Ingestion: Severe intestinal tract irritant. Do not induce vomiting.

Inhalation: May cause irritation to the respiratory tract and lungs.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s). Hazardous components are marked with an asterisk* as listed under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 15 for the nature/limits of the hazard.

<u>Ingredients</u>	<u>CAS #</u>	<u>Approx. %</u>
*Sodium hydroxide	1310-73-2	1-5%
Sodium sulfamate	13845-18-6	1-6%
Sodium bromosulfamate	134509-56-1	20-25% Combined
Sodium chlorosulfamate	17172-27-9	

(Note: There is no free sodium bromide or sodium hypochlorite in the finished product)

SECTION 4: FIRST AID MEASURES

Eyes: Flush with water for 15 minutes holding eyelids open. Call a physician.

Skin: Immediately flush with water for at least 15 minutes. For a large splash, flood body under a shower. Call a physician.

Ingestion: Do not induce vomiting. Do not give water. Call a physician.

Inhalation: Remove to fresh air. Treat symptoms. Call a physician.

Note to Physicians: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.



Hazard Class, Primary:	8 – Corrosive
Packaging Group:	III
IMDG Page No:	ND
IATA Packing Instruction:	808
IATA Cargo Aircraft Limit:	1.0 L
Flash Point:	None
Technical Name:	N/A
RQ LBS (Per Package):	N/A
RQ Components:	N/A

SECTION 15: REGULATORY INFORMATION

The following regulations apply to this product.

Federal Regulations:

OSHA's Hazard Communication Rule, 29 CFR 1910.1200: Based on our evaluation there are no applicable hazardous components.

CERLA/SUPERFUND, 40 CFR 117, 301: N/A

SARA/SUPERFUND AMENDMENTS ACT OF 1986 (TITLE III) – SECTIONS 302,311,312,AND 313:

Section 302 – Extremely hazardous substances (40 CFR 355): This product does not contain ingredients listed in Appendix A and B as an extremely hazardous substance.

Sections 311 and 312 – Material Safety Data Sheet Requirements (40 CFR 370): Our hazard evaluation has found this product to be mildly hazardous due to skin and eye corrosivity. The product should be reported under the following EPA hazard categories:

Yes	Immediate (acute) health hazard
no	Delayed (chronic) health hazard
no	Fire hazard

Section 313 - List of Toxic Chemicals (40CFR 372): This product does not contain ingredients on the list of Toxic Chemicals.

Toxic Substance Control act (TSCA): The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

Food and Drug Administration: Federal Food, Drug, and Cosmetic Act: N/A

Resource Conservation and Recovery Act (RCRA), 40CFR 261 Subpart C and D: Consult Section 13 for RCRA classification.

Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15: N/A

State Regulations:

California Proposition 65: None of the chemicals on the current Proposition 65 list are known to be present in this product.

Michigan Critical Materials: This product does not contain substance (s) identified on this list.

State Right to Know Laws: N/A

SECTION 16: OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

N/A = Not Applicable

ND = None Detected

Updated: October 13, 2014, Nakeeta Sawyers

All information appearing herein is based upon data obtained from the legislative and/or recognized technical sources. While the information is believed to be accurate, Enviro Tech makes no representation as to its accuracy or sufficiency. Conditions of use are beyond Enviro Tech's control and therefore users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or 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 in any other process.

THE LINDE GROUP



2-85% CARBON DIOXIDE In ARGON

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name 2-85% CARBON DIOXIDE In ARGON

Product Code(s) G-107

UN-Number UN1956

Recommended Use Welding.

Trade Name CORGON 80CORGON 100CORGON 150CORGON 200CORGON 250CRONIGON 20CRONIGON 2.5.

Supplier Address* Linde Gas North America LLC - Linde Merchant Production Inc. - Linde LLC
575 Mountain Ave.
Murray Hill, NJ 07974
Phone: 908-464-8100
www.lindeus.com

Linde Gas Puerto Rico, Inc.
Las Palmas Village
Road No. 869, Street No. 7
Catano, Puerto Rico 00962
Phone: 787-641-7445
www.pr.lindegas.com

Linde Canada Limited
5860 Chedworth Way
Mississauga, Ontario L5R 0A2
Phone: 905-501-1700
www.lindecana.com

* May include subsidiaries or affiliate companies/divisions.

For additional product information contact your local customer service.

Chemical Emergency Phone Number Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Simple asphyxiant
Contents under pressure
Keep at temperatures below 52°C / 125°F

Appearance Colorless

Physical State Compressed gas.

Odor Odorless

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Suitable Extinguishing Media	Use extinguishing agent suitable for type of surrounding fire.
Explosion Data	
Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None
Specific Hazards Arising from the Chemical	Cylinders may rupture under extreme heat. Continue to cool fire exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.
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	Ensure adequate ventilation. Evacuate personnel to safe areas. Use personal protective equipment. Monitor oxygen level.
Environmental Precautions	Prevent spreading of vapors through sewers, ventilation systems and confined areas.
Methods for Containment	Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Linde location.
Methods for Cleaning Up	Return cylinder to Linde or an authorized distributor.
Other Information	Ventilate the area.

7. HANDLING AND STORAGE

Handling	<p>Use only in ventilated areas. Never attempt to lift a cylinder by its valve protection cap.</p> <p>Protect cylinders from physical damage: do not drag, roll, slide or drop. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Use equipment rated for cylinder pressure. Use backflow preventive device in piping. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur.</p> <p>Use an adjustable strap wrench to remove over-tight or rusted caps. Close valve after each use and when empty. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier.</p> <p>Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.</p> <p>For additional recommendations consult Compressed Gas Association's Pamphlets P-1 and Safety Bulletin SB-2.</p>
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Storage

Protect from physical damage. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Full and empty cylinders should be segregated. Use a "first in, first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Always store and handle compressed gas cylinders in accordance with Compressed Gas Association, Pamphlet CGA-P1, Safe Handling of Compressed Gases in Containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines			
Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Carbon dioxide 124-38-9	STEL = 30000 ppm TWA: 5000 ppm	TWA: 5000 ppm TWA: 9000 mg/m ³ (varied) TWA: 18000 ppm (varied) TWA: 18000 mg/m ³ (varied) STEL: 30000 ppm (varied) STEL: 54000 mg/m ³	IDLH: 40000 ppm TWA: 5000 ppm TWA: 9000 mg/m ³ STEL: 54000 mg/m ³ STEL: 30000 ppm

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).
Engineering Measures	Local exhaust ventilation to prevent accumulation of high concentrations and maintain air oxygen levels at or above 19.5%.
Ventilation	Use ventilation adequate to keep exposures below recommended exposure limits.
Personal Protective Equipment	
Eye/Face Protection	Wear protective eyewear (safety glasses).
Skin and Body Protection	Work gloves and safety shoes are recommended when handling cylinders.
Respiratory Protection	
General Use	No respiratory equipment is needed if workplace oxygen levels are kept above 19.5%.
Emergency Use	Use positive pressure airline respirator with escape cylinder or self contained breathing apparatus for oxygen deficient atmospheres (<19.5%).
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

Proper shipping name
Hazard Class
Subsidiary Class
UN Number
Description
Emergency Response Guide Number

Compressed gas, n.o.s.
2.2
None
UN1956
UN1956, Compressed gas, n.o.s.(Argon, Carbon Dioxide), 2.2
1.26

TDG

Proper Shipping Name
Hazard Class
UN Number
Description

Compressed gas, n.o.s.
2.2
UN1956
UN1956, COMPRESSED GAS, N.O.S., 2.2

MEX

Proper Shipping Name
Hazard Class
UN Number
Description

Compressed gas, n.o.s.
2.2
UN1956
UN1956 Compressed gas, n.o.s.(Argon, Carbon Dioxide), 2.2

ATA

UN Number
Proper Shipping Name
Hazard Class
Etc Code
Description
Maximum Quantity for Passenger
Maximum Quantity for Cargo Only
Limited Quantity

UN1956
Compressed gas, n.o.s.
2.2
2L
UN1956, Compressed gas, n.o.s.(Argon, Carbon Dioxide), 2.2
75 kg
150 kg
No information available.

IMDG/IMO

Proper Shipping Name
Hazard Class
UN Number
Etc. No.
Description

Compressed gas, n.o.s.
2.2
UN1956
F+; S+V
UN1956, Compressed gas, n.o.s.(Argon, Carbon Dioxide), 2.2

AOR

Proper Shipping Name
Hazard Class
UN Number
Classification Code
Description

Compressed gas, n.o.s.
2.2
UN1956
1A
UN1956 Compressed gas, n.o.s.(Argon, Carbon Dioxide), 2.2.

15. REGULATORY INFORMATION

International Inventories

ISCA
DSL
EINECS/ELINCS

Complies
Complies
Complies

15. REGULATORY INFORMATION

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 Commercial Chemical Substances/ EU List of Notified Chemical Substances

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
Chronic Health Hazard
Fire Hazard
Sudden Release of Pressure Hazard
Reactive Hazard

Yes
No
No
Yes
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).

Risk and Process Safety Management Programs
This material, as supplied, does not contain any regulated substances with specified thresholds under 40 CFR Part 68.
This product does not contain any substances regulated as highly hazardous chemicals pursuant to the 29 CFR Part 1910.110.

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.

CECLIA/SARA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CECLIA) (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.

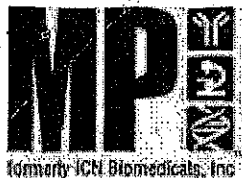
U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Argon	X	X	X		X
Carbon dioxide	X	X	X		X

International Regulations



Material Safety Data Sheet

Catalog Number: 193919
Revision date: 16-Feb-2004

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY INFORMATION

Catalog Number: 193919

Product name: CHLOROQUINE DIPHOSPHATE SALT

Synonyms: Chloroquinone Phosphate

Supplier:

MP Biomedicals, Inc.
1263 S. Chillicothe Rd.
Aurora, OH 44202
tel: 330-562-1500

Emergency telephone number: CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA Exposure Limits:
CHLOROQUINE DIPHOSPHATE SALT	50-63-5	90-100%	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: May cause skin irritation and/or dermatitis

Principle routes of exposure: Skin

Inhalation: May cause irritation of respiratory tract

Ingestion: May be harmful if swallowed.

Skin contact: May cause allergic skin reaction

Eye contact: Avoid contact with eyes

Statements of hazard MAY CAUSE ALLERGIC SKIN REACTION.

Statement of Spill or Leak - ANSI Label Eliminate all ignition sources. Absorb and/or contain spill with inert materials (e.g., sand, vermiculite). Then place in appropriate container. For large spills, use water spray to disperse vapors, flush spill area. Prevent runoff from entering waterways or sewers.

4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation: Move to fresh air. Call a physician immediately.

Skin contact: Rinse immediately with plenty of water and seek medical advice

Ingestion: Do not induce vomiting without medical advice.

Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Protection of first-aiders: No information available

Catalog Number: 193919

Product name: CHLOROQUINE DIPHOSPHATE
SALT

Page 1 of 5

Medical conditions aggravated by exposure: None known

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Use dry chemical, CO2, water spray or "alcohol" foam
Specific hazards:	Burning produces irritant fumes.
Unusual hazards:	None known
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
Specific methods:	Water mist may be used to cool closed containers.
Flash point:	Not determined
Autoignition temperature:	Not determined
NFPA rating:	
NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Use personal protective equipment.
Environmental precautions:	Prevent product from entering drains.
Methods for cleaning up:	Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Storage:
ROOM TEMPERATURE

Handling:	Use only in area provided with appropriate exhaust ventilation.
Safe handling advice:	Wear personal protective equipment.
Incompatible products:	Oxidising and spontaneously flammable products

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: Breathing apparatus only if aerosol or dust is formed.

Hand protection: Pvc or other plastic material gloves

Skin and body protection: Usual safety precautions while handling the product will provide adequate protection against this potential effect.

Eye protection: Safety glasses with side-shields

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Powder
Formula:	C18H26ClN3·2H3O4P
Molecular weight:	515.9
Melting point/range:	No data available at this time.
Boiling point/range:	No Data available at this time.

Catalog Number: 193919

Product name: CHLOROQUINE DIPHOSPHATE
SALT

Density:	No data available
Vapor pressure:	No data available
Evaporation rate:	No data available
Vapor density:	No data available
Solubility (in water):	Soluble
Flash point:	Not determined
Autoignition temperature:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Polymerization:	None under normal processing.
Hazardous decomposition products:	Chloride/Hydrochloric acid , Nitrogen oxides (NOx)/ammonia/CN-, Potassium oxides (K ₂ O)
Materials to avoid:	Strong oxidising agents
Conditions to avoid:	Exposure to air or moisture over prolonged periods.

11. TOXICOLOGICAL INFORMATION

Product Information

Acute toxicity

Components

CHLOROQUINE DIPHOSPHATE
SALT

RTECS Number:

VB2450000

Selected LD50s and LC50s

Oral LD50 Mouse : 500 mg/kg

Chronic toxicity:	Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.
Local effects:	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Specific effects:	May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.
Primary irritation:	No data is available on the product itself.
Carcinogenic effects:	No data is available on the product itself.
Mutagenic effects:	No data is available on the product itself.
Reproductive toxicity:	No data is available on the product itself.

12. ECOLOGICAL INFORMATION

Mobility:	No data available
Bioaccumulation:	No data available
Ecotoxicity effects:	No data available
Aquatic toxicity:	May cause long-term adverse effects in the aquatic environment.

Components	U.S. DOT - Appendix B - Marine Pollutan	U.S. DOT - Appendix B - Severe Marine Pollutants	United Kingdom - The Red List:
CHLOROQUINE DIPHOSPHATE SALT	Not Listed	Not Listed	Not Listed

Components	Germany VCI (WGK)	World Health Organization (WHO) - Drinking Water	Ecotoxicity - Fish Species Data
CHLOROQUINE DIPHOSPHATE SALT	Not Listed	Not Listed	Not Listed

Components	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Microtox Data	Ecotoxicity - Water Flea Data
CHLOROQUINE DIPHOSPHATE SALT	Not Listed	Not Listed	Not Listed
Components	EPA - ATSDR Priority List	EPA - HPV Challenge Program Chemical List	California - Priority Toxic Pollutants
CHLOROQUINE DIPHOSPHATE SALT	Not Listed	Not Listed	Not Listed
Components	California - Priority Toxic Pollutants	California - Priority Toxic Pollutants	
CHLOROQUINE DIPHOSPHATE SALT	Not Listed	Not Listed	

13. DISPOSAL CONSIDERATIONS**Waste from residues / unused products:**

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

Contaminated packaging:

Do not re-use empty containers

14. TRANSPORT INFORMATION**UN/Id No:**

Not regulated

DOT:**Proper shipping name:**

Not Regulated

Components	U.S. DOT - Appendix A Table 1 - Reportable Quantities
CHLOROQUINE DIPHOSPHATE SALT	Not Listed

TDG (Canada):**WHMIS hazard class:**

Non-controlled

IMDG/IMO**IMDG - Hazard Classifications**

Not Applicable

Components	U.S. DOT - Appendix B - Marine Pollutan	U.S. DOT - Appendix B - Severe Marine Pollutants
CHLOROQUINE DIPHOSPHATE SALT	Not Listed	Not Listed

IMO-labels:**15. REGULATORY INFORMATION****International Inventories**

Catalog Number: 193919

Product name: CHLOROQUINE DIPHOSPHATE
SALT

Page 4 of 5

Components

CHLOROQUINE DIPHOSPHATE SALT

Inventory - United States TSCA - Sect. 8(b)

Not Listed

Canada DSL Inventory List -

Not Listed

Australia (AICS):

Present

Inventory - China:

Present

EU EINECS List -

200-055-2; C18H26CIN3.2H3O4P

Inventory - Japan:

9-279

Philippines PICCS:

Present

U.S. regulations:**Components**

CHLOROQUINE

DIPHOSPHATE SALT

California Proposition 65

Not Listed

Massachusetts Right to

Know List:

Not Listed

New Jersey Right to

Know List:

Not Listed

Pennsylvania Right to Know

List:

Not Listed

Components

CHLOROQUINE

DIPHOSPHATE SALT

Florida substance List:

Not Listed

Rhode Island Right to

Know List:

Not Listed

Illinois - Toxic Air

Contaminants

Not Listed

Connecticut - Hazardous Air

Pollutants

Not Listed

Components

CHLOROQUINE

DIPHOSPHATE SALT

SARA 313 Emission
reporting/Toxic Release
of Chemicals

Not Listed

CERCLA/SARA - Section NTP:

302 Extremely Haz

Not Listed

None

IARC:

None

SARA 313 Notification:

The above is your notification as to the SARA 313 listing for this product(s) pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

If you are unsure if you are subject to the reporting requirements of Section 313, or need more information, please call the EPA Emergency Planning and Community Right-To-Know Information Hotline: (800) 535-0202 or (202) 479-2499 (in Washington, DC or Alaska).

State Notification:

The above information is your notice as to the Right-to-Know listings of the stated product(s). Individual states will list chemicals for a variety of reasons including, but not limited to, the compounds toxicity; carcinogenic, tumorigenic and/or reproductive hazards; and the compounds environmental impact if accidentally released.

16. OTHER INFORMATION**Prepared by:** Health & Safety

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, MP Biomedicals does not guarantee the 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. MP Biomedicals 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



**Fisher
Scientific**

**ACROS
ORGANICS**

MSDS

**IMPORTANT SAFETY INFORMATION -- DO NOT DISCARD.
PLEASE ROUTE TO COMPANY SAFETY OFFICER.**

DUBUQUE COUNTY HISTORICAL
SOCIETY
350 EAST THIRD STREET
ATTN LEE JACKSON

DUBUQUE

IA 52001

5,716

**IF NAME AND/OR ADDRESS HAVE CHANGED, CONTACT YOUR
SALES REPRESENTATIVE OR LOCAL BRANCH.**

FOR EACH CHEMICAL, A MSDS SHEET WILL BE SENT ONLY ON THE
FIRST SHIPMENT UNLESS A SUBSTANTIAL REVISION OCCURS.

REQUIRED MATERIAL SAFETY DATA SHEETS (MSDS) NOT INCLUDED IN
THIS MAILING WILL FOLLOW UNDER SEPARATE COVER.

THIS PACKET MAY CONTAIN MSDS FOR PRODUCTS MANUFACTURED BY
OTHERS AND DISTRIBUTED BY FISHER SCIENTIFIC COMPANY OR ACROS
ORGANICS. THESE MSDS WERE PREPARED BY THE MANUFACTURER
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AVAILABLE ELECTRONICALLY THROUGH CHEMEXPRESS®.
CHEMEXPRESS IS OBTAINABLE ON CD OR DISKETTES; WINDOWS OR
MACINTOSH; SINGLE USER OR NETWORK. FOR PRICING AND
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FISHER SCIENTIFIC HAS A COMPLETE LINE OF SAFETY PRODUCTS AND INFORMATION FOR THE LABORATORY.
CONTACT YOUR LOCAL FISHER BRANCH FOR FILMS, BROCHURES, CATALOGS AND PRODUCTS.
THE NEW ACROS ORGANICS CATALOG OFFERS ONE OF THE BROADEST LINES OF ORGANIC CHEMICALS
IN THE WORLD. CONTACT YOUR LOCAL FISHER BRANCH TO PLACE AN ORDER, TO RECEIVE A CATALOG
OR TO RECEIVE A FREE SUBSCRIPTION TO THE ACROS ORGANICS ACTA.

*** MATERIAL SAFETY DATA SHEET ***

Citric Acid, Anhydrous, U.S.P./N.F. (Granular)
5200

*** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ***

SDS Name: Citric Acid, Anhydrous, U.S.P./N.F. (Granular)
Catalog Number: AC40528000, S72836-1, S72836-2, A940-1, A940-500,
A940-11C, A940250LB, A95-250LB, A95-3, A9520LB, B9339-500, S7299
Synonyms:
2-Hydroxy-1,2,3-propanetricarboxylic acid.
Company Identification: Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
or information, call: 201-796-7100
mergency Num.: 201-796-7100
or CHEMTREC assistance, call: 800-424-9300
or International CHEMTREC assistance, call: 703-527-3887

*** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ***

CAS#	Chemical Name	%	ELINECS#
77-92-9	Citric acid	99.0	201-059-1
Hazard Symbols: Xi			
Risk Phrases: 36/37/38			

*** SECTION 3 - HAZARDS IDENTIFICATION ***

EMERGENCY OVERVIEW

Appearance: White powder.
Irritation: Causes respiratory tract irritation. Causes skin
irritation. Causes severe eye irritation. May
cause skin sensitization by skin contact.
Target Organs: None.

Potential Health Effects

Eye:
Causes severe eye irritation and possible injury.
Skin:
Causes skin irritation. May cause skin sensitization, an allergic
reaction, which becomes evident upon re-exposure to this material.
Ingestion:
May cause gastrointestinal irritation with nausea, vomiting and
diarrhea. Excessive intake of citric acid may cause erosion of the
teeth.
Inhalation:
Causes respiratory tract irritation.
Chronic:
Repeated exposure may cause sensitization dermatitis.

*** SECTION 4 - FIRST AID MEASURES ***

Eyes:
Immediately flush eyes with plenty of water for at least 15 minutes,
occasionally lifting the upper and lower eyelids. Get medical aid. Do
NOT allow victim to rub or keep eyes closed.
Skin:
Flush skin with plenty of water for at least 15 minutes while
removing contaminated clothing and shoes. Get medical aid if
irritation develops or persists. Wash clothing before reuse.
Ingestion:
Do NOT induce vomiting. 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 from exposure and move to fresh air immediately. If breathing
is difficult, give oxygen. Get medical aid. Do NOT mouth-to-mouth
resuscitation. If breathing has ceased apply artificial respiration
using oxygen and a suitable mechanical device such as a bag and a
mask.
Notes:
Physician:
Treat symptomatically and

*** SECTION 5 - FIRE FIGHTING MEASURES ***

General Information:
As in any fire, wear a self-contained breathing apparatus in
pressure-demand, MSHA/NIOSH (approved or equivalent) and full
protective gear. During a fire, irritating and highly toxic gases
may be generated by thermal decomposition or combustion. This
material may burn in sufficient quantity and reduced particle size is capable
of creating dust explosion.
Extinguishing Media:
Use water spray, dry chemical, carbon dioxide, or chemical foam. Use

agent most appropriate to extinguish fire. Do NOT get water inside
containers.
Flash Point: Temperature: 1850 deg F (1,010.00 deg C)
Flash Point: Not applicable.
Explosion Limits, lower: 2.29
Explosion Limits, upper: 2.29
NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

*** SECTION 6 - ACCIDENTAL RELEASE MEASURES ***

General Information: Use proper personal protective equipment as indicated
in Section 8.

Spills/Leaks:
Vacuum or sweep up material and place into a suitable disposal
container. Very fine particles can cause a fire or explosion.
Eliminate all ignition sources. Clean up spills immediately,
observing precautions in the Protective Equipment section. Avoid
generating dusty conditions. Remove all sources of ignition. Provide
ventilation. Spill may be carefully neutralized with lime (calcium
oxide, CaO). Do not get water inside containers.

*** SECTION 7 - HANDLING AND STORAGE ***

Handling:
Wash thoroughly after handling. Use with adequate ventilation.
Minimize dust generation and accumulation. Avoid contact with eyes,
skin, and clothing. Keep container tightly closed. Avoid ingestion
and inhalation. Do not allow contact with water. Keep from contact
with moist air and steam.
Storage:
Store in a tightly closed container. Store in a cool, dry,
well-ventilated area away from incompatible substances. Store
protected from moisture.

*** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ***

Engineering Controls:
Facilities storing or utilizing this material should be equipped
with an eyewash facility and a safety shower. Use adequate
ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Citric acid	none listed	none listed	none listed

OSHA Vacated PELs:
Citric acid:
No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

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:

Wear appropriate protective gloves to prevent skin
exposure.
Wear appropriate protective clothing to prevent skin
exposure.

Clothing:

Follow the OSHA respirator regulations found in 29
CFR 1910.134 or European Standard EN 149. Always use
a NIOSH or European Standard EN 149 approved
respirator when necessary.

Respirators:

Physical State: Solid
Color: White powder
Odor: Odorless.
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: 153 - 154.5 deg C
Decomposition Temperature: 59.24 (206C)
Solubility in water: 1.6650g/cm3
Specific Gravity/Density: 1.66807
Molecular Weight: 192.12

*** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ***



Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: Contact Cleaner 2000® Precision Cleaner (aerosol)

Product Number (s): 02140

Manufactured By:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-4620
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Colorless volatile liquid with ethereal and faint sweetish odor

WARNING

Vapor harmful. Eye irritant. Contents under pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE:	Irritant. Liquid contact will irritate and may cause conjunctivitis.
SKIN:	Prolonged and/or repeated contact with material can cause irritation and defatting of the skin.
INHALATION:	Overexposure to vapor may cause dizziness, loss of concentration and irritation. With high exposure levels, effects can include central nervous system (CNS) depression and cardiac arrhythmia. Product vapors displace air and can cause suffocation especially in a confined space.
INGESTION:	Discomfort due to volatility would be expected. Some of the inhalation effects could be expected.
CHRONIC EFFECTS:	None identified.
TARGET ORGANS:	None identified.

Medical Conditions Aggravated by Exposure:

Pre-existing respiratory or cardiac conditions could be worsened by exposure to vapors.

See Section 11 for toxicology and carcinogenicity information on product ingredients.

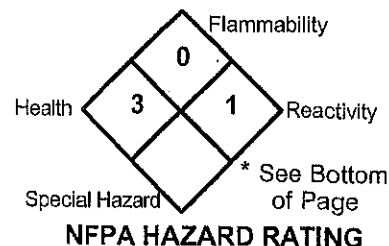
MATERIAL SAFETY DATA SHEET

4

Distributed by:

Hawkeye Foodservice Distribution, Inc.

Corporate Office: P.O. Box 1820, Iowa City, IA 52244-1820
(319) 645-2193 www.hawkeyefoodservice.com



Product Name: Conquer

24-HOUR EMERGENCY PHONE #: 1-800-424-9300 (CHEMTREC)

Revised: 1/8/2007

Int

Supersedes: 2/28/2003

I. IDENTIFICATION

Chemical Name And Synonyms:

Not applicable

DOT Shipping Name

Compounds, Cleaning Liquid
(Sodium Hydroxide/Sodium Hypochlorite)

Chemical Family:

Alkali

DOT Hazard Class & I.D. Number

Corrosive Material NA1760

PG
8 II

II. HAZARDOUS INGREDIENTS

Component	CAS NO.	%	TLV	PEL	Toxic	Hazard
Sodium Hydroxide	1310-73-2	16	2 mg/M3	2 mg/M3	NA	Corrosive to skin and eyes
Sodium hypochlorite	7681-52-9	3	NE	NE	NA	Severe irritation/burns to skin, eyes and mucous membranes.
Trade Secret	TSRN 1800		NE	NE	NA	

chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR,372).

NA: Not applicable
NE: Not established

III. PHYSICAL DATA

Boiling Point: Not established

Specific Gravity: 1.252

Appearance: Clear, pale yellow liquid

Form: Liquid

pH, 1% Soln.: 12.6

Solubility In Water: Complete

Odor: None

IV. FIRE AND EXPLOSION HAZARD DATA

Flashpoint: Not Applicable

Extinguishing Media: Use media appropriate to surrounding fire.

Special Fire

Fighting Procedures: Although this product is not combustible, if a fire occurs in the near vicinity, good firefighting practice dictates the use of self-contained breathing apparatus and other protective gear. Cool fire-exposed containers with water.

Unusual Fire And

Explosion Hazards: If the stock solution container breaks, the solution should be handled with care as it is corrosive. Direct contact with water can cause an exothermic reaction.

V. HEALTH HAZARD DATA

Carcinogenic: The raw materials used in this product are not considered to be a carcinogen by NTP, IARC, and OSHA

Effects Of Over-exposure: Corrosive. Causes irritation (possibly severe), burns to the eyes. May cause permanent eye damage. Causes irritation (possibly severe), burns to the skin. Causes irritation (possibly severe), burns, nausea, vomiting to the gastrointestinal tract. The severity of effects depend on concentration and how soon after exposure the area is washed.

Agency And First

aid Procedures: EYES: Flush with water for 15 minutes, raise eyelids for complete rinsing. Get immediate medical attention.
SKIN: Immediately flush with water for 15 minutes. Remove contaminated clothing and wash before reuse. Get immediate medical attention. Discard contaminated leather goods.
INGESTION: Do not induce vomiting. Give large quantities of water. Get immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

ROI MAKE the River table Sand

SAFETY DATA SHEET

CURED EPDM RUBBER

Manufactured By: Sparton Enterprises, Inc.
3717 Clark Mill Rd. Phone: 330-745-6088 Fax: 330-745-5862
Barberton, OH 44203

LATEST REVISION DATE: 12/12/21

PRODUCT IDENTIFICATION

Generic ID: EPDM Rubber Granules (Cured)
Brand Names: Sparton EPDM Rubber Granules

HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>Percent</u>	<u>TLV</u>	<u>Hazard</u>
Zinc Oxide	6.2	10 mg/m3	Nuisance Dust
Calcium Carbonate	1.0	10 mg/m3	Nuisance Dust

PHYSICAL DATA

Appearance and Odor: Rubber Granules - Characteristic Rubber Odor
Solubility in Water: Not Soluble
Specific Gravity: 1.5 +/- .1 (Water = 1.0)
Boiling Point: N/A
Vapor Pressure & Density: N/A
Evaporation Rate: N/A

FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Determined
Flammable Limits: N/A
Extinguishing Media: Water, Foam, or Dry Chemical Extinguisher
Special Fire Fighting Procedures: Firefighters to wear Self-Contained Breathing Apparatus
Unusual Fire/Explosion Hazards: Product does not present any known explosion hazard

HEALTH HAZARD DATA

Primary Routes of Entry: (*) Inhalation-If processed with heat () Skin () Ingestion
Medical Conditions Aggravated by Exposure: No applicable information available.
Acute Health Hazards: None known or expected. Ingredients bound to rubber so inhalation during handling is not a problem. Exposure to volatiles released during hot processing such as extrusion may cause respiratory, nose, or eye irritation in some people.
Chronic Health Hazards: Long-term inhalation exposure to concentrated hot processing fumes have been reported to reduce lung function & cause chronic bronchitis.

Carcinogenicity: Rubber compound not listed by NPT, IARC, OSHA, or Otherwise known to be a carcinogen.

FIRST AID PROCEDURES

Inhalation: Not expected to be compound-related effect. Remove to fresh air, if not breathing, give artificial respiration and call for emergency assistance.
Skin: Compound-related effects not expected. If any irritation develops or persists, see a physician.
Ingestion: Compound-related effects not expected. If ingested, treat symptoms and contact a physician.

REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None Known
Hazardous Polymerization: Will not occur
Hazardous Decomposition Products: Typical products could include hydrocarbons and oxides of carbon and sulfur.

SPILL OR LEAK PROCEDURES

Pick or sweep up material and place in suitable container for disposal. Product is not defined as hazardous waste. Incinerate or landfill in accordance with applicable federal, state, and local regulations.

SPECIAL PRECAUTIONS

Protective Equipment: Eye protection should be worn.
Ventilation: Natural sufficient for normal handling. Mechanical exhaust required for hot processing such as curing or extrusion.
Other Protective Equipment: None normally required for routine handling.
Hygiene Practices: Maintain good personal hygiene when working with rubber compounds. Change soiled clothing regularly. Wash hands and other exposed skin surfaces thoroughly.
Handling and Storage: No special precautions known to be needed.
Other Precautions: Subjecting this product to further processing steps involving heat and/or exposure to nitrogen containing materials can form higher amounts of nitrosoamines which are believed to present a health hazard and are carcinogens in animals. Employees must avoid inhaling fumes from hot rubber processing.

The information accumulated herein is believed to be accurate, but is not warranted to be. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.



Safety Data Sheet

CWT-30

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: CWT-30
SDS Number: 0030
Revision Date: 10/2/2017
Product Use: Water Treatment Compound
Supplier Details: Alliance Group, Inc. 800-648-7339
N114 W18621 Clinton Drive
Germantown, WI 53022

Contact: CHEMTEL
Phone: 1-800-255-3924

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):
No GHS Classifications Indicated

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: NONE

No GHS pictograms Indicated for this product

GHS Hazard Statements:

No GHS hazards statements indicated

GHS Precautionary Statements:

No GHS precautionary statements indicated

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Eyes; Skin;
Target Organs: No data available.
Inhalation: None reportable
Skin Contact: May cause slight skin irritation.
Eye Contact: May cause eye irritation.
Ingestion: None reportable

Classification of the substance or mixture:
The product is not classified as hazardous according to the GHS

Label Elements

GHS label elements: Not regulated
Hazard pictogram: Not regulated
Signal word: Not regulated
Hazard Statements: Not regulated
Precautionary Statements: Not regulated

3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Chemical Characterization: Mixtures

Components: None in reportable quantities

4 FIRST AID MEASURES

Inhalation: Move victim to fresh air. Obtain medical attention if complaints of irritation
Skin Contact: Wash with soap and water. If skin irritation or rash occurs: Get medical attention
Eye Contact: Remove contact lenses if worn. Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. If symptoms persist, consult a doctor.
Ingestion: Rinse out mouth and drink large quantities of water. Do not induce vomiting. Immediately seek medical attention.

5 FIRE FIGHTING MEASURES

Flammability: This product is NOT flammable or combustible.
Flash Point: No data available.
Flash Point Method: No data available.
Burning Rate: No data available.
Autoignition Temp: No data available.
LEL: No data available.
UEL: No data available.

Fire Fighting Methods

Evacuate area of unprotected personal. Wear protective clothing including NIOSH Approved self-contained breathing apparatus.

Use water spray to cool fire exposed containers and disperse vapors.

Extinguishing Media

Suitable: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Absorb liquid components with liquid-binding material

Unsuitable fire extinguisher: None

Unusual Fire or Explosion Hazards: No data available.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment.. Ensure adequate ventilation.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let undiluted products enter sewage drains or reach ground water.

Spill

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

Handling Precautions: Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.
Storage Requirements: Keep container tightly closed in a dry and well ventilated area. Do not store in unlabeled or mislabeled containers.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: No relevant information available
Personal Protective Equipment: Hygiene Measures:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Keep away from foodstuffs, beverages, and feed.
Respiratory:
No personal respiratory protective equipment is required.

Eyes and Face:
Wear chemical safety goggles/ glasses while handling this product.
Skin:
Gloves are advised for repeated or prolonged contact
Wear protective gloves to handle contents of damaged or leaking units.

This product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Limitation and supervision into the environment: No special requirements

Risk management measures: No special requirements

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear. Colorless
Physical State:	Liquid
Odor:	Odorless.
Odor Threshold:	No data available.
Molecular Formula:	No data available.
Particle Size:	No data available.
Solubility:	Fully miscible.
Spec Grav./Density:	1.00-1.10
Softening Point:	No data available.
Viscosity:	No data available.
Percent Volatile:	No data available.
Sat. Vap. Conc.:	No data available.
Heat Value:	No data available.
Boiling Point:	> 212 °F
Freezing/Melting Pt.:	32°F
Flammability:	No data available.
Flash Point:	No data available.
Partition Coefficient:	No data available.
Octanol:	No data available.
Vapor Pressure:	No data available.
Vapor Density:	No data available.
pH:	3.5-4.0
VOC:	No data available.
Evap. Rate:	No data available.
Bulk Density:	No data available.
Molecular weight:	No data available.
Auto-Ignition Temp:	No data available.
Decomp Temp:	No data available.
UFL/LFL:	No data available.

Lower Explosion Limits: No data available.

Upper Explosion Limits: No data available.

10 STABILITY AND REACTIVITY

Reactivity:	No relevant data available.
Chemical Stability:	Product is stable under normal temperatures and pressures.
Conditions to Avoid:	No data available.
Materials to Avoid:	Reacts with strong oxidizers and strong alkali materials
Hazardous Decomposition:	Possible in traces. No thermal decomposition if used and stored according to specifications.
Hazardous Polymerization:	Will not occur under normal conditions.

11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification: None

Primary irritant effect:

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

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

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

IARC: None of the ingredients are listed

NTP: None of the ingredients are listed

OSHA- Ca: None of the ingredients are listed

Probable routes of exposure: Ingestion, Inhalation, Eye contact, Skin contact

Chronic Toxicological Effects: No information available

The following statement is for Germ cell mutagenicity, Carcinogenicity, Reproductive toxicity, Aspiration hazard:

****Based on available data, the classification criteria are NOT met**

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ECOLOGICAL INFORMATION

TOXICITY

Mobility in Soil: No relevant information available

Persistence and degradability: No relevant information available

Bioaccumulative Potential: No relevant information available

Aquatic toxicity : No relevant information available

Additional Ecological Information:

It is determined that the products are not classifiable as environmentally hazardous based on the bridging principles for classification of mixtures as provided in the GHS regulations.

13

DISPOSAL CONSIDERATIONS

The user of this material has the responsibility to dispose of unused material, residues, and containers in accordance with local, state, and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied.

Recommended cleansing agent: Water, if necessary with cleansing agents.

This material is not listed as a hazardous waste if and when it is discarded.

14

TRANSPORT INFORMATION

Not DOT regulated as a hazardous product.

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REGULATORY INFORMATION

FEDERAL REGULATIONS

TSCA Inventory Status:

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category:

Immediate(Acute) Health Hazard:NO

Delayed (Chronic) Health Hazard:NO

Fire Hazard:NO

Sudden Release of Pressure Hazard:NO

Reactive Hazard:NO

SARA Section 302/355/313/HAP: None of the ingredients are listed

STATE REGULATIONS

California- The following components are listed under Prop 65: None.

Wisconsin- The following components are listed as a Wisconsin HAP: None.

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OTHER INFORMATION

HMIS III: Health = 1, Fire = 0, Physical Hazard = 0

HMIS	
HEALTH	<input checked="" type="checkbox"/> 1
FLAMMABILITY	<input type="checkbox"/> 0
PHYSICAL HAZARD	<input type="checkbox"/> 0
PERSONAL PROTECTION	<input type="checkbox"/>

Publication Date: 10/2/2017

Prepared By: P. May

Reason for Revision: Updated GHS & regulatory information

This information is given in good faith and based on our current knowledge of the product.

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 herein, and assume no responsibility regarding the suitability 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 purpose(s).

SAFETY DATA SHEET

Dowfrost



Section 1. Identification

GHS product identifier : Dowfrost
Other means of identification : Not available.
Product type : Liquid.
Supplier's details : Barton Solvents, Inc.
1920 NE Broadway PO Box 221
Des Moines, IA 50306-0221
(515) 265-7998
Emergency telephone number : CHEMTREC (800) 424-9300 (AVAILABLE 24 HOURS A DAY)

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.
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5.9%

GHS label elements

Signal word : No signal word.
Hazard statements : No known significant effects or critical hazards.

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.

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 : 0800000

Ingredient name	%	CAS number
1,2-Propylene glycol	95 - 100	57-55-6
Dipotassium Hydrogen Phosphate	<3	7758-11-4
Water	<3	7732-18-5

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 | : 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. |
|--|---|

- | | |
|--|---|
| 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.
- 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

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.

Section 8. Exposure controls/personal protection

- 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** : 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.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : 10 [Basic.]
- Melting point** : May start to solidify at the following temperature: 0°C (32°F) This is based on data for the following ingredient: Water. Weighted average: -58.23°C (-72.8°F)
- Boiling point** : 152°C (305.6°F)
- Flash point** : Closed cup: 104°C (219.2°F). (Pensky-Martens.)
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : <0.5 compared with butyl acetate
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 2.6% Upper: 12.5%
- Vapor pressure** : 0.3 kPa (2.2 mm Hg) (at 20°C)
- Vapor density** : >1 (Air = 1)
- Relative density** : 1.05 (Water = 1)
- Solubility** : Easily soluble in the following materials: cold water, hot water, methanol, acetone. Insoluble in the following materials: diethyl ether, n-octanol.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : 371°C (699.8°F)
- Decomposition temperature** : Not available.
- SADT** : Not available.
- Viscosity** : 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.

Section 10. Stability and reactivity

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 : 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 : 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

Section 11. Toxicological information

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

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards	Additional information
DOT Classification	Not regulated.	-	-	-	No.	-

Section 14. Transport information

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

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): Not determined.

Clean Air Act Section 112 : Not listed
(b) Hazardous Air
Pollutants (HAPs)

Clean Air Act Section 602 : Not listed
Class I Substances

Clean Air Act Section 602 : Not listed
Class II Substances

DEA List I Chemicals : Not listed
(Precursor Chemicals)

DEA List II Chemicals : Not listed
(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Canada inventory : Not determined.

International regulations

Chemical Weapons : Not listed
Convention List Schedule I
Chemicals

Chemical Weapons : Not listed
Convention List Schedule
II Chemicals

Chemical Weapons : Not listed
Convention List Schedule
III Chemicals

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	0
Flammability	1
Reactivity	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 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.)



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	: 12/1/2015.
Revision Date	: 12/1/15
Revision comments	: Not available.
Version	: 2
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 : Dowfrost is a trademark of the Dow Chemical Company

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.



MATERIAL SAFETY DATA SHEET

De-Solv-It®

® A registered trademark of the ORANGE-SOL Group of Companies, Ltd.

Section 1 Product & Company Identifications

Product Name: De-Solv-It®

Product Use: Removal of grease, oil, tar, asphalt, chewing gum, crayon, fresh blood, grass stains, soap scum, waxes, oily cosmetics, adhesives, scuff marks and stickers.

Distributor: ORANGE-SOL Household Products, Inc.

1400 N. Fiesta Blvd., Bldg. 100

Gilbert, AZ 85233-1023

For Information & Emergencies: (480) 497-8822 (7 am-5pm, Mon-Fri MST) www.orange-sol.com

Preparation Date: 1 Oct 2004

Revision Date:

MSDS #: 70004-006

Section 2 Information on Ingredients

Product Mixture: No hazardous ingredients as per OSHA, 29CFR 1910.1200.

Components: This section is proprietary.

Section 3 Hazardous Identification

Emergency Overview: Avoid inhalation of mist and contact with eyes.

Primary Routes of Contact: Ingestion, inhalation, and absorption.

Physical Hazard: None established.

Health Hazard

Eye: May cause irritation.

Skin: Repeated or prolonged exposure may cause dermatitis in sensitive individuals.

Ingestion: May cause gastric disturbances such as diarrhea.

Vapor Inhalation: Avoid mists, which may irritate mucous membranes.

Carcinogenicity Listings: NTP: None. IARC: None.

OSHA: None. ACGIH: None.

Signs and Symptoms of Overexposure: Red, dry skin at point of contact.

Medical Conditions Aggravated by Exposure: Dermatitis may become aggravated by sensitive individuals.

Section 4 First Aid Procedures

Eye: Remove contact lenses, flush with water for at least 15 minutes while lifting eyelids. If irritation develops and persists, contact a physician.

Skin: Remove effected clothing. Wash skin thoroughly with soap and water. If irritation develops and persists, contact a physician.

Ingestion: If swallowed, do not induce vomiting. May cause chemical pneumonia if aspirated into lungs.

Inhalation: Move to fresh air. If irritation develops and persists, contact a physician.

Section 5 Fire & Explosion Hazard

Flash Point and Method: 176°F, PMCC. ASTM D-93.

Flammability: Non-Combustible per FHSA, 16CFR 1500.3(C)(6)(iii).

Explosion Data: Sensitivity to impact: None. Sensitivity to static charge: None.

Combustion Products: As with any organic material, combustion will produce carbon dioxide an/or carbon monoxide.

Extinguishing Media: Water fog, carbon dioxide, dry chemical, foam.

Unusual Fire and Explosion Hazard: None.

Special Firefighting Precautions: Do not use streams of water; may spread burning liquid.

Firefighting Equipment: Use self-contained breathing apparatus in any enclosed area.

Section 6 Accidental Release Measures

Small Spills: Absorb with suitable material. Dispose in an appropriate waste container.

Large Spills: Dike with soil, and or other suitable materials avoiding the use of sawdust. Recover usable product, rinse area clean.

Personal Precautions: No special requirements.

Environmental Precautions: No special requirements known.

Section 7 Handling & Storage

Safe Handling and Hygienic Practices: Avoid prolonged skin contact. Wash after using.

Storage Requirements: Store in tightly closed, original container away from flame or other ignition source.

Section 8 Exposure Controls

Engineering Controls: No special requirements.

Personal Protection

Ventilation: No Special requirements.

Respiratory: Avoid breathing mist.

Eye Protection: Eye protection based on splash potential.

Clothing: Gloves recommended for sensitive individuals.

Exposure Limit Guidelines: None established.

Section 9 Physical & Chemical Properties

Appearance and Odor: Clear orange color with a citrus odor.

Specific Gravity: .786, 6.56 lbs/US gallon.

Vapor Density: (Air=1), >1.

Vapor Pressure: Not Determined.

Evaporation Rate: (BuAc=1) >1.

pH of Concentrate: None

Solubility in Water: Dispersible.

Percent Volatile by Volume: 84%.

Section 10 Stability & Reactivity

Stability: Stable.

Conditions to Avoid: Avoid contact with oxidizing agents and acids.

Hazardous Decomposition: None expected under normal conditions.

Hazardous Polymerization: Should not occur.

Section 11 Toxicity Information

Toxicity: None known.

Section 12 Disposal Considerations

Biodegradability: Biodegradable.

RCRA Classification: This product has been evaluated for RCRA characteristics and does not meet the criteria for a hazardous waste, if discarded in its purchased form.

Special Instructions: No special requirements.

Section 13 Transportation Information

DOT Labeling: The combustible liquid n.o.s. label is exempt in container under 110 gallons. Regulation 49CFR 173.118A.

Proper Shipping Name: Combustible liquid n.o.s.

Hazard Class: Combustible. Class 3

Identification Number: UN 1268. Packing group III

Section 14
Regulatory Information

CERCLA, State and Local Planning (Reportable Quantities): Not required.

OSHA Compliance: This MSDS prepared in accordance with 29CFR 1910.1200 and ANSI Z400.1 standard.

SARA Title III Superfund: The product in its purchased form is not regulated under the SARA "Hazard Categories" under Section 311 and 312 of the Superfund Amendment and the Reauthorization Act of 1986 (SARA Title III).

State Right-to-Know Compliance: Not required.

TSCA: Although components of this product find listing under the Toxic Substances Act (TSCA), this blended product requires no import or export declaration.

Volatile Organic Compound (VOC) Content: Under C₁₂ exemption contains 37.5 Wt. %

Special Instructions: No special requirements.

Section 15
Other Information

Hazard: (Based on HMIS Standard), Health: 0 Flammability: 2 Reactivity: 0

Hazard Index: Minimal: 0, Slight: 1, Moderate: 2, High: 3, Extreme: 4



HEALTH	0
FLAMMABILITY	2
REACTIVITY	0
PERSONAL PROTECTION	

We believe the information contained herein is accurate and current as of the date of this Material Safety Data Sheet. Nevertheless, the user must evaluate and determine whether the conditions for use and application of the product, including proper disposal thereof, are appropriate, safe, and legal.



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: DOWFROST™ Heat Transfer Fluid

Issue Date: 04/09/2015

Print Date: 07/07/2015

THE DOW CHEMICAL COMPANY 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. IDENTIFICATION

Product name: DOWFROST™ Heat Transfer Fluid

Recommended use of the chemical and restrictions on use

Identified uses: Intended as a heat transfer fluid for closed-loop systems. This product is acceptable for use where there is possibility of incidental food contact and as a product for use in the immersion or spray freezing of wrapped meat and packaged poultry products. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Glycol

This product is a mixture.

Component	CASRN	Concentration
Propylene glycol	57-55-6	> 95.0 %
Dipotassium hydrogen phosphate	7758-11-4	< 3.0 %
Water	7732-18-5	< 3.0 %

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 effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

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.

5. FIREFIGHTING 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.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

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: 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.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition 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.

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). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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: Small spills: Absorb with materials such as: Cat litter, Sawdust, Vermiculite, Zorb-all®, Collect in suitable and properly labeled containers. Large spills: Dike area to contain spill. Recover spilled material if possible. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: No special precautions required. Keep container closed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Conditions for safe storage: Do not store in: Galvanized steel. Opened or unlabeled containers. Store in original unopened container. See Section 10 for more specific information. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Propylene glycol	US WEEL	TWA	10 mg/m3

Exposure controls

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

For the major component(s): Propylene glycol.
LD50, Rabbit, > 20,000 mg/kg

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

For the major component(s):
LC50, Rat, 4 Hour, vapour, 6.15 mg/l No deaths occurred following exposure to a saturated atmosphere.

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.
Repeated contact may cause flaking and softening of skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization

For the major component(s):
Did not cause allergic skin reactions when tested in humans.

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)

In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Carcinogenicity

Similar formulations did not cause cancer in laboratory animals.

Teratogenicity

For the major component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

For the major component(s): In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

Mutagenicity

In vitro genetic toxicity studies were negative. For the major component(s): Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity

Propylene glycol

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, 40,613 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

LC50, *Ceriodaphnia dubia* (water flea), static test, 48 Hour, 18,340 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

ErC50, *Pseudokirchneriella subcapitata* (green algae), 96 Hour, Growth rate inhibition, 19,000 mg/l, OECD Test Guideline 201

Toxicity to bacteria

NOEC, *Pseudomonas putida*, 18 Hour, > 20,000 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, *Ceriodaphnia dubia* (water flea), semi-static test, 7 d, number of offspring, 13,020 mg/l

Dipotassium hydrogen phosphate

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, *Leuciscus idus* (Golden orfe), static test, 48 Hour, > 900 mg/l, Method Not Specified.

Persistence and degradability

Propylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

10-day Window: Pass

Biodegradation: 81 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable

Biodegradation: 96 %

Exposure time: 64 d

Method: OECD Test Guideline 306 or Equivalent

Theoretical Oxygen Demand: 1.68 mg/mg

Chemical Oxygen Demand: 1.53 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	69.000 %
10 d	70.000 %
20 d	86.000 %

Photodegradation

Atmospheric half-life: 10 Hour

Method: Estimated.

Dipotassium hydrogen phosphate

Biodegradability: Biodegradation is not applicable.

Bioaccumulative potential

Propylene glycol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -1.07 Measured

Bioconcentration factor (BCF): 0.09 Estimated.

Dipotassium hydrogen phosphate

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility.

Mobility in soil

Propylene glycol

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient(Koc): < 1 Estimated.

Dipotassium hydrogen phosphate

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices 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 responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS

INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code

Not regulated for transport
Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

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

OSHA Hazard Communication Standard

This product is not 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

This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

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 Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components

Propylene glycol

CASRN

57-55-6

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.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System**NFPA**

Health	Fire	Reactivity
0	1	0

Revision

Identification Number: 101234106 / A001 / Issue Date: 04/09/2015 / Version: 7.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

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.

THE DOW CHEMICAL COMPANY 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.

MATERIAL SAFETY DATA SHEET

B66W213

05 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

B66W213

HMIS CODES

Health	2*
Flammability	0
Reactivity	0

PRODUCT NAME

DTM ACRYLIC Semi-Gloss Acrylic Coating, Deep Base

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, OH 44115

EMERGENCY TELEPHONE NO.

(216) 566-2917

DATE OF PREPARATION

23-OCT-06

INFORMATION TELEPHONE NO.

(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
4	111-77-3	2-(2-Methoxyethoxy)-ethanol		
		ACGIH TLV	Not Available	1 mm
		OSHA PEL	Not Available	
0.1	14464-46-1	Cristobalite		
		ACGIH TLV	0.05 mg/m3 as Resp. Dust	
		OSHA PEL	0.05 mg/m3 as Resp. Dust	
7	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

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.

Continued on page 2

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page 3

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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	9.30 lb/gal	1114 g/l
SPECIFIC GRAVITY	1.12	
BOILING POINT	212 - 500 F	100 - 260 C
MELTING POINT	Not Available	
VOLATILE VOLUME	64 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
1.66 lb/gal	199 g/l	Less Water and Federally Exempt Solvents
0.74 lb/gal	89 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

Continued on page 4

B66W213

page 4

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
111-77-3	2-(2-Methoxyethoxy)-ethanol	LC50	RAT	4HR	Not Available
		LD50	RAT		5500 mg/kg
14464-46-1	Cristobalite	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 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

No data available.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	4	

Continued on page 5

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page 5

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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

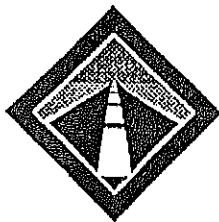
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

=====

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.



CIVIL ENGINEERING

PT98

EM 5-2 GEL

EPOXY MORTAR -TROWEL GRADE

PILGRIM EM 5-2 GEL is a 100% solid, two-component high strength gelled epoxy adhesive. Non-sag consistency for overhead patching, gap-filling, joining irregular shaped materials; and as a binder in epoxy mortars. Moisture insensitive: May be used on dry, damp or wet surfaces.

USES: **Concrete construction**
 Bridges
 Culverts
 New to old concrete

Crack repair
Tanks
Adhesive for: wood, steel, fiberglass
Grout bolts and dowels

Florida DOT TYPE A,B,F1
Louisiana DOT TYPE I,II,III C
ASTM C-881, Georgia Type 111
Tennessee DOT List 8 & 22



FLORIDA PRESTRESSED CONCRETE ASSOCIATION

TEST PROPERTIES:

CONSISTENCY: sag, in.	0.0
DEFLECTION TEMPERATURE	121 F
GEL TIME, min., 77°F	30
WATER ABSORPTION, %	0.2
COMPRESSIVE STRENGTH,psi 24 hr.	6700
DIRECT TENSILE STRENGTH,psi	650+
DIAGONAL SHEAR STRENGTH,psi	6365+

POT LIFE: 20-35 minutes at 72° F.

CAUTION: Pot life is dependent upon material temperature and quantity mixed. The greater the mass the shorter the pot life. Mix only that quantity that can be applied within its pot life.

COVERAGE: 1 gallon neat - 231 cu. in. (see chart over)
1 gallon mixed A & B with 2 gallons aggregate
yields approx. 462 cu. in. of grout.

PACKAGING: 2-gallon, 10 gallon, and 300 and 600 milliliter cartridges. Refer to data sheet on EM 5-2 GEL Cartridge System for complete information.

PILGRIM PERMOCOAT, INC.

Main office and factory: 402 S. 22nd Street, Tampa, FL 33605 (813) 248-3328 FAX# (813) 248-1076
Distribution : USA, Canada & Caribbean



CIVIL ENGINEERING

PT98

9pgs

EM 5-2 GEL

EPOXY MORTAR -TROWEL GRADE

PILGRIM EM 5-2 GEL is a 100% solid, two-component high strength gelled epoxy adhesive. Non-sag consistency for overhead patching, gap-filling, joining irregular shaped materials; and as a binder in epoxy mortars. Moisture insensitive: May be used on dry, damp or wet surfaces.

USES: Concrete construction
Bridges
Culverts
New to old concrete

Crack repair
Tanks
Adhesive for: wood, steel, fiberglass
Grout bolts and dowels

Florida DOT TYPE A,B,F1
Louisiana DOT TYPE I,II,III C
ASTM C-881, Georgia Type 111
Tennessee DOT List 8 & 22



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Main office and factory: 402 S. 22nd Street, Tampa, FL 33605 (813) 248-3328 FAX# (813) 248-1076
Distribution : USA, Canada & Caribbean

EM 5-2 GEL COVERAGES

Thickness (1000 mils = 1in.)	Coverage / gallon No aggregate
1/4" = 250 mils	6.4 sq. ft.
3/16" = 187.50	8.5 sq. ft.
1/8" = 125 mils	12.8 sq. ft.
100 mils	16.0 sq. ft.

Yield : Lineal feet per gallon
Joint height & width in inches

	1/4	1/2	3/4	1
1/4	308			
1/2	154	77		
3/4	102	51	34	
1	77	38	25	19

LIMITATIONS: Do not thin EM 5-2 GEL. Solvent will prevent proper cure.

MIXING: Combine A component with B component at the ratio of 1 to 1 by volume. Mix for approximately 3 minutes with a Jiffy mixer (or equivalent) on a low speed (400-600 rpm) drill until uniform color and consistency is obtained. PILGRIM EM 5-2 GEL is designed for application both neat and as a mortar. Proportion of aggregate to mixed epoxy varies with proposed end use - do not exceed 3 parts aggregate to 1 part mixed EM 5-2 GEL.

CAUTION —Aggregate must be oven dried to avoid encapsulation of moisture.

VISCOSITY: Thixotropic gel

COLOR: Gray (mixed)

MIX RATIO: 1 : 1 (A:B) by volume

PREPARATION: Clean substrate, remove laitance, curing compounds, other coatings, oil, grease, rust, waxes, and other bond-inhibiting substances. All surfaces must be clean sound, and free of surface water. Clean by mechanical abrasion methods such as sandblasting. Concrete may be damp or dry.

LIMITATIONS: Pilgrim EM 5-2 GEL produces a vapor barrier. Do not apply to surfaces where transmitted vapor can condense and freeze under adhesive. Minimum application temperature 40°F.

CLEAN-UP: Clean tools and equipment with Pilgrim #5 Cleaner to remove uncured material.

STORAGE: Store inside in tightly closed containers at moderate temperatures; avoid overheating and freezing. Opened containers should be sealed as soon as possible to prevent moisture contamination. Shelf life is two years in original packaging.

HANDLING PRECAUTIONS:

For Industrial Use Only! Warning! May produce skin irritation and on prolonged contact may cause serious skin dermatitis. Skin contact should be avoided by use of protective clothing such as rubber gloves and eye protection. Any skin coming in contact with resin should be washed thoroughly with soap and water. Eye contact should be avoided; should it occur, flush thoroughly with water for at least 15 minutes.

WEAR PROTECTIVE CLOTHING, GOGGLES, GLOVES, AND/OR BARRIER CREAMS.

Consult Material Safety Data Sheets.

PILGRIM WARRANTS ITS PRODUCTS TO BE FREE OF MANUFACTURING DEFECTS AND THAT THEY WILL MEET PILGRIM'S CURRENT PUBLISHED PHYSICAL PROPERTIES WHEN APPLIED WITH PILGRIM'S DIRECTIONS AND TESTED IN ACCORDANCE WITH ASTM AND PILGRIM STANDARDS. THERE ARE NO OTHER WARRANTIES BY PILGRIM OF ANY NATURE WHATSOEVER, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THIS PRODUCT. PILGRIM SHALL NOT BE LIABLE FOR DAMAGES OF ANY SORT, INCLUDING REMOTE OR CONSEQUENTIAL DAMAGES, RESULTING FROM ANY CLAIMED BREACH OF ANY WARRANTY, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR FROM ANY OTHER CAUSE WHATSOEVER.

MATERIAL SAFETY DATA SHEET

PILGRIM PERMOCOAT, INC.
402 S. 22ND ST.
TAMPA, FLORIDA 33605

PILGRIM CODE-ANT
ISSUE DATE-11/16/87
REVISED-7/17/2000

A. TRADE NAME - EM 5-2 GEL, A COMPONENT
CHEMICAL NAME - EPOXY FORMULATION

CAS# - MIXTURE
DOT CLASS - NOT REGULATED
HMIS: H-1, F-1, R-0
MOLECULAR WEIGHT - NA

FORMULA - PROPRIETARY

EMERGENCY CONTACT - ROBERT FORLONG

DAY PHONE - 813-248-3328
NIGHT PHONE - 813-737-2236

B. FIRST AID MEASURES

EYES - IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES HOLDING LIDS APART. CALL A PHYSICIAN.

SKIN - WASH THOROUGHLY WITH SOAP AND WATER. IF IRRITATION DEVELOPS AND PERSISTS, SEE A PHYSICIAN. WASH CLOTHES BEFORE REUSE.

INHALATION - REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH TO MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

INGESTION - MAY CAUSE GASTROINTESTINAL DISTRESS, IRRITATION, ULCKERATION. DRINK LARGE QUANTITIES OF WATER. CONSULT A PHYSICIAN.

C. HAZARDS INFORMATION**FIRE AND EXPLOSION**

FLASH POINT - 490°F

AUTO IGNITION TEMPERATURE - NA

UNUSUAL FIRE AND EXPLOSION HAZARDS - DECOMPOSITION AND COMBUSTION PRODUCTS MAY BE TOXIC.

HEALTH

INHALATION - IRRITATION, SENSITIZATION AND DERMATITIS.

INGESTION - MAY CAUSE GASTROINTESTINAL DISTRESS OR IRRITATION.

SKIN - PROLONGED AND REPEATED CONTACT MAY CAUSE IRRITATION AND RESULT IN SENSITIZATION AND ALLERGIC REACTION.

EYES - VAPOR MAY CAUSE IRRITATION, REDNESS AND TEARING. LIQUID MAY CAUSE SEVERE IRRITATION WITH POSSIBLE IRREVERSIBLE INJURY.

UNUSUAL CHRONIC TOXICITY - NONE KNOWN.

PERMISSIBLE CONCENTRATION (AIR) - NOT KNOWN

D. PRECAUTIONS/PROCEDURES

VENTILATION - GOOD MECHANICAL VENTILATION AND LOCAL EXHAUST

NORMAL HANDLING - DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT BREATHE VAPORS. KEEP CONTAINERS CLOSED. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

STORAGE - STORE IN A COOL, DRY AREA AWAY FROM HEAT, STRONG OXIDIZERS. PROTECT FROM DAMAGE

SPILL OR LEAK - ABSORB SPILL ON SAND, EARTH OR VERMICULITE.

CAREFULLY COLLECT INTO CLOSED CONTAINERS FOR DISPOSAL ACCORDING TO FEDERAL, STATE OR LOCAL REGULATIONS.

FIRE EXTINGUISHING PRECAUTIONS - WEAR FULL PROTECTIVE GEAR AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS.

FIRE EXTINGUISHING AGENTS TO AVOID - SOLID STREAM OF WATER OR FOAM MAY CAUSE FROTHING, SPLATTERING AND SPREAD HAZARD.

SPECIAL PRECAUTIONS/PROCEDURES - COOL CONTAINERS EXPOSED TO FLAME WITH WATER SPRAY.

E. PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY EQUIPMENT - ORGANIC CHEMICAL CARTRIDGE RESPIRATOR, IF NEEDED.

EYES - CHEMICAL SPLASH - PROOF GOGGLES.

HANDS, ARMS AND BODY - RUBBER OR POLYETHYLENE GLOVES AND FULL BODY COVERING CLOTHING.

OTHER CLOTHING AND EQUIPMENT - EYE WASH FOUNTAIN AND SAFETY SHOWER.

F. PHYSICAL DATA

DESCRIPTION - DIGLYCIDYL ETHER RESIN

BOILING POINT - >200°F

VAPOR DENSITY - NA

SOLUBILITY IN WATER - NONE

EVAPORATION RATE - NIL

SPECIFIC GRAVITY - 0.1.3

VAPOR PRESSURE - CA. 1 MM HG AT 180C

PH - NA

% VOLATILES (BY VOLUME) - NIL

G. REACTIVITY DATA

STABILITY - STABLE

INCOMPATIBLE MATERIALS - STRONG OXIDIZERS, ACIDS AND EPOXY CURING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS - CO, CO₂, NOT AS A RESULT OF THERMAL DECOMPOSITION.

HAZARDOUS POLYMERIZATION - WILL NOT OCCUR.

H. HAZARDOUS INGREDIENTS (MIXTURES)

INGREDIENTS	PERCENTAGE	CAS#	TLV
EPOXY RESIN	>70%	25068-38-6	NE
CELLULOSE	<2%	9004-34-6	NE
FLY ASH	<10%	13983-17-0	10 MG/M3
TIO2	<2%	13463-67-7	10 MG/CU.M.
SILICA	<10%	14808-60-7	0.1 MG/M3
AMMONIUM BENTONITE	5%	NA	NA

I. ENVIRONMENTAL

BIODEGRADABILITY - NOT KNOWN

WASTE DISPOSAL METHODS - DISPOSE OF AS HAZARDOUS WASTE IN APPROVED WASTE DISPOSAL FACILITIES IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

J. REFERENCES

PERMISSIBLE CONCENTRATION REFERENCES - ACGIHTWA, TLV, AND STEL
REGULATORY STANDARDS - TITLE 49 CFR SECTION 173.118, 172.101
GENERAL - NIOSH GUIDE TO CHEMICALS

K. ADDITIONAL INFORMATION

EMPTY CONTAINER HANDLING:

WARNING! EMPTIED CONTAINER RETAINS PRODUCT RESIDUE AND VAPORS.
OBSERVE ALL LABEL PRECAUTIONS EVEN AFTER CONTAINER IS EMPTIED.
DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR CONTAINER.

L. SHIPPING INFORMATION

NOT REGULATED UNDER CURRENT DOT, IMO OR ICO REGULATIONS

INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE. HOWEVER, IT IS PROVIDED SOLELY FOR THE CUSTOMERS CONSIDERATION, INVESTIGATION AND VERIFICATION. PILGRIM PERMOCOAT INC. HEREBY SPECIFICALLY DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, REGARDING THE ACCURACY AND COMPLETENESS OF SUCH INFORMATION, AND MAKES NO REPRESENTATIONS WITH RESPECT THERETO.

MATERIAL SAFETY DATA SHEET

PILGRIM PERMOCOAT, INC.
402 S. 22ND ST.
TAMPA, FLORIDA 33605

PILGRIM CODE-BOAT
ISSUE DATE-11/16/87
REVISED-7/18/2000

A. TRADE NAME - EM 5-2 GEL, B COMPONENT

CHEMICAL NAME - AMIDO AMINE

FORMULA - COMPLEX POLYMER

EMERGENCY CONTACT - ROBERT FORLONG

CAS# - NONE

DOT CLASS - CORROSIVE

HMIS: H-2, F-1, R-0

MOLECULAR WEIGHT - NA

DAY PHONE - 813-248-3328

NIGHT PHONE - 813-737-2236

B. FIRST AID MEASURES

EYES - IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES HOLDING LIDS APART. CALL A PHYSICIAN.

SKIN - WASH THOROUGHLY WITH SOAP AND WATER. IF IRRITATION DEVELOPS AND PERSISTS, SEE A PHYSICIAN. WASH CLOTHES BEFORE REUSE.

INHALATION - REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH TO MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

INGESTION - MAY CAUSE GASTROINTESTINAL DISTRESS, IRRITATION ULCERATION. DRINK LARGE QUANTITIES OF WATER. CONSULT A PHYSICIAN.

C. HAZARDS INFORMATION**FIRE AND EXPLOSION**

FLASH POINT -100°C AUTO IGNITION TEMPERATURE - NA

FLAMMABLE LIMITS: LOWER - NA UPPER - NA

UNUSUAL FIRE AND EXPLOSION HAZARDS - NONE KNOWN

HEALTH

INHALATION - VAPORS MAY IRRITATE NOSE AND UPPER RESPIRATORY TRACT.

INGESTION - MAY CAUSE GASTROINTESTINAL DISTRESS OR IRRITATION.

SKIN - PROLONGED AND REPEATED CONTACT MAY CAUSE IRRITATION AND RESULT IN SENSITIZATION AND ALLERGIC REACTION.

EYES - VAPOR MAY CAUSE IRRITATION, REDNESS AND TEARING. LIQUID MAY CAUSE SEVERE IRRITATION WITH POSSIBLE IRREVERSIBLE INJURY.

UNUSUAL CHRONIC TOXICITY - NONE KNOWN.

PERMISSIBLE CONCENTRATION (AIR) - NOT ESTABLISHED.

D. PRECAUTIONS/PROCEDURES

VENTILATION - GOOD MECHANICAL VENTILATION AND LOCAL EXHAUST

NORMAL HANDLING - DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT BREATHE VAPORS. KEEP CONTAINERS CLOSED. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.
STORAGE - STORE IN COOL, DRY AREA AWAY FROM HEAT, STRONG OXIDIZERS. PROTECT FROM DAMAGE
SPILL OR LEAK - ABSORB SPILL ON SAND, EARTH OR VERMICULITE.

CAREFULLY COLLECT INTO CLOSED CONTAINERS FOR DISPOSAL ACCORDING TO FEDERAL, STATE OR LOCAL REGULATIONS.

FIRE EXTINGUISHING PRECAUTIONS - WEAR FULL PROTECTIVE GEAR AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS.

FIRE EXTINGUISHING AGENTS TO AVOID - SOLID STREAM OF WATER OR FOAM MAY CAUSE FROTHING, SPLATTERING AND SPREAD HAZARD.

SPECIAL PRECAUTIONS/PROCEDURES - COOL CONTAINERS EXPOSED TO FLAME WITH WATER SPRAY.

E. PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY EQUIPMENT - ORGANIC CHEMICAL CARTRIDGE RESPIRATOR, IF NEEDED.

EYES - CHEMICAL SPLASH - PROOF GOGGLES.

HANDS, ARMS AND BODY - RUBBER OR POLYETHYLENE GLOVES AND FULL BODY COVERING CLOTHING.

OTHER CLOTHING AND EQUIPMENT - EYE WASH FOUNTAIN AND SAFETY SHOWER.

F. PHYSICAL DATA

DESCRIPTION - AMBER LIQUID WITH AMINE ODOR.

BOILING POINT - DECOMPOSES

VAPOR DENSITY - NA

SOLUBILITY IN WATER - NA

EVAPORATION RATE - NIL

SPECIFIC GRAVITY - 0.905

VAPOR PRESSURE - NA

PH - NA

% VOLATILES (BY VOLUME) - NIL

G. REACTIVITY DATA

STABILITY - STABLE

INCOMPATIBLE MATERIALS - STRONG OXIDIZERS, ACIDS AND EPOXY RESINS.

HAZARDOUS DECOMPOSITION PRODUCTS - CO, CO₂, NOT AS A RESULT OF THERMAL DECOMPOSITION.

HAZARDOUS POLYMERIZATION - WILL NOT OCCUR.

H. HAZARDOUS INGREDIENTS (MIXTURES)

INGREDIENTS	PERCENTAGE	CAS#	TLV
AMIDO AMINE	>70%	68910-93-0	NE
CELLULOSE	<2%	9004-34-6	NE
FLY ASH	<10%	13983-17-0	10 MG/M3
TIO2	<2%	13463-67-7	10 MG/CU.M.
SILICA	<10%	14808-60-7	0.1 MG/M3
AMMONIUM BENTONITE	5%	NA	NA

I. ENVIRONMENTAL

BIODEGRADABILITY - NOT KNOWN

WASTE DISPOSAL METHODS - DISPOSE OF AS HAZARDOUS WASTE IN APPROVED WASTE DISPOSAL FACILITIES IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

J. REFERENCES

PERMISSIBLE CONCENTRATION REFERENCES - NA

REGULATORY STANDARDS - NA

GENERAL - NIOSH GUIDE TO CHEMICALS

K. TRANSPORTATION INFORMATION

CORROSIVE LIQUID, N.O.S.
(POLYALKYLAMINES)
8, UN 1760, III

L. ADDITIONAL INFORMATION

EMPTY CONTAINER HANDLING

WARNING! EMPTIED CONTAINER RETAINS PRODUCT RESIDUE AND VAPORS.
OBSERVE ALL LABEL PRECAUTIONS EVEN AFTER CONTAINER IS EMPTIED.
DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR CONTAINER.

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ENVIRONMENTAL DATA

SECTION I

PRODUCT/COMPOSITION

NO.	COMPONENT	CAS NUMBER	PERCENT
P	MODIFIED POLYAMIDOAMINE	MIXTURE	100

SECTION II

SARA TITLE III INFORMATION

NO.	EHS RQ (LBS) (*1)	EHS TPQ (LBS) (*2)	SEC 313 (*3)	313 CATEGORY (*4)	311/312 CATEGORIES (*5)
P					H-1

FOOTNOTES

*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC. 302

*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC. 302

*3 = TOXIC CHEMICAL, SEC. 313

*4 = CATEGORY AS REQUIRED BY SEC. 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC RELEASE INVENTORY FORM

*5 = HAZARD CATEGORY FOR SARA SEC. 313/312 REPORTING

HEALTH	H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD	H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL	P-3 = FIRE HAZARD	P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
	P-5 = REACTIVE HAZARD	

SECTION III

ENVIRONMENTAL RELEASE INFORMATION

KEEP OUT OF SURFACE WATERS, SEWERS, AND WATERWAYS ENTERING OR LEADING TO SURFACE WATERS. NOTIFY AUTHORITIES IF ANY EXPOSURE TO THE GENERAL PUBLIC OR ENVIRONMENT OCCURS OR IS LIKELY TO OCCUR.

EPA - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT, UNDER EPA-CERCLA ("SUPERFUND") RELEASES TO AIR, LAND OR WATER MAY BE REPORTABLE TO THE NATIONAL RESPONSE CENTER, 800-424-8802 (CIRCUMSTANCES SURROUNDING THE RELEASE AND CLEANUP DETERMINE REPORTABILITY).

SECTION IV

RCRA INFORMATION

PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.



Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: Food Grade Silicone (Aerosol)

Product Number (s): 03040, 83040

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-4620
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Clear, water-white liquid with mild solvent odor

DANGER

Extremely flammable. Harmful or fatal if swallowed. Contents under pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE: May cause mild irritation including stinging and redness, but does not injure eye.

SKIN: Single, brief exposures may cause mild irritation. Frequent or prolonged contact may cause more severe irritation, defatting of the skin, and dermatitis.

INHALATION: High vapor concentrations are irritating to the respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. May cause peripheral nervous system disorder and/or damage.

INGESTION: Low order of toxicity by ingestion. Main hazard is aspiration into the lungs during swallowing or vomiting. Small amounts aspirated into the respiratory system may cause bronchopneumonia or pulmonary edema, possibly progressing to death.

CHRONIC EFFECTS: Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

TARGET ORGANS: central nervous system, peripheral nervous system, respiratory system

Medical Conditions Aggravated by Exposure: skin and respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hexane isomers	various	60 - 70
n-Hexane	110-54-3	4.8
Dimethylpolysiloxane	63148-62-9	2 - 5
Liquefied petroleum gas	68476-86-8	25 - 35

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. Contact a physician immediately.
- Note to Physicians:* Treat symptomatically. Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions (16 CFR 1500.3(c)(6)).

Flash Point:	< 0 F (TCC)	Upper Explosive Limit:	9.0
Autoignition Temperature:	489 F	Lower Explosive Limit:	1.7

Suitable Extinguishing Media: Class B fire extinguishers, dry chemical, foam or CO2

Products of Combustion: fumes, smoke and carbon monoxide

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 fog or spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Do not spray water directly on fire; product will float and could be reignited on surface of water.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Product Name: Food Grade Silicone (Aerosol)

Product Number (s): 03040, 83040

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. Remove all sources of ignition. 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: Use proper grounding and bonding procedures for transferring materials. Do not use product near any source of ignition. Do not touch container to electrical sources as container will conduct electricity. Avoid contact with eyes and skin. Avoid breathing vapors.

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:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Hexane isomers	500(v)	1000(v)	500	1000	NE		ppm
n-Hexane	500	NE	50(s)	NE	NE		ppm
Dimethylpolysiloxane	NE	NE	NE	NE	NE		
Liquefied petroleum gas	1000	NE	1000	NE	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation of vapors. 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. Use a NIOSH-approved cartridge respirator with an organic vapor cartridge if vapors exceed exposure limits. 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, PVC or 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: clear, water-white

Product Name: Food Grade Silicone (Aerosol)

Product Number (s): 03040, 83040

Odor: mild solvent

Specific Gravity: 0.6694

Initial Boiling Point: 140 F

Freezing Point: < -76 F

Vapor Pressure: 160 mmHg @ 68 F

Vapor Density: > 1 (air = 1)

Evaporation Rate: 19 (Butyl acetate = 1)

Solubility: negligible in water

pH: NA

Volatile Organic Compounds: wt %: 97 g/L: 649.9 lbs./gal: 5.4

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: sources of ignition, temperature extremes

Incompatible Materials: strong oxidizers

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 EFFECTS

<u>Component</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
n-hexane	LD50	28710 mg/kg	Oral	Rat
n-hexane	LD50	3000 mg/kg	Dermal	Rabbit
n-hexane	LC50	48000 ppm/4H	Inhalation	Rat

CHRONIC EFFECTS

Carcinogenicity:

	<u>Component</u>	<u>Result</u>
OSHA:	None listed	
IARC:	None listed	
NTP:	None listed	

Mutagenicity: 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: n-hexane - 48 Hr EC50 water flea: 3.87 mg/L
96 Hr LC50 Lepomis macrochirus: 4.12 mg/L

Product Name: Food Grade Silicone (Aerosol)

Product Number (s): 03040, 83040

Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Disposal: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001 (See 40 CFR Part 261.20 – 261.33).
Aerosol containers should be emptied and depressurized before disposal. Empty containers may be recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground): Consumer Commodity, ORM-D

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal

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: n-hexane (5000 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	Yes
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	Yes

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:
n-hexane (4.8%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): n-hexane

State RegulationsCalifornia 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

State Right to Know:

New Jersey: 75-83-2, 110-54-3, 79-29-8, 68476-86-8
Pennsylvania: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8
Massachusetts: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8
Rhode Island : 110-54-3, 68476-86-8

Additional Regulatory Information:

This product is 'Not for Retail Sale' in states with consumer products VOC regulations.

Section 16: Other Information

NFPA:	Health: 2	Flammability: 3	Reactivity: 0	
HMIS:	Health: 2	Flammability: 3	Reactivity: 0	PPE: B

Prepared By: Michelle Rudnick
CRC #: 519A
Revision Date: 6/15/2006

Changes since last revision: VOC g/L changed to 649.9 in section 9

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.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
PMCC:	Pensky-Martens Closed Cup	g/L:	grams per Liter
PPE:	Personal Protection Equipment	lbs./gal:	pounds per gallon
TWA:	Time Weighted Average	STEL:	Short Term Exposure Limit
OSHA:	Occupational Safety and Health Administration		
ACGIH	American Conference of Governmental Industrial Hygienists		
NIOSH	National Institute of Occupational Safety & Health		

MATERIAL SAFETY DATA SHEET

Revised: 09/05/00
Replaces: None
Printed: 04/12/01

P
CAROLINA BIOLOGICAL

Revised: 09/05/00
Replaces: None
Printed: 04/12/01

MATERIAL SAFETY DATA SHEET

1. PRODUCT DESCRIPTION

Product Name: Formula 4-24 (R)
Product Code(s): 17-3200, 17-3202, 17-3204, 17-3210, 17-3212, 17-3214
Size: Various
Chemical Name: Does not apply. Product is a mixture.
CAS Number: Does not apply. Product is a mixture.
Formula: See section 2
Synonyms:
Distributor: Carolina Biological Supply Company
2700 York Road
Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm EST) M-F
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Principle Hazardous Components:
TLV and PEL limits:

ACGIH-TLV:
OSHA-PEL:

3. HAZARD IDENTIFICATION

Emergency Overview:
Potential Health Effects:
Eyes: May cause irritation.
Skin: May cause irritation.
Ingestion: May cause gastrointestinal discomfort.
Inhalation: May cause irritation to respiratory tract.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:
Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.
Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.
Ingestion - If swallowed, if conscious, give plenty of water. Immediately call a physician or poison control center. Never give anything by mouth to an unconscious person.
Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm, quiet, and get medical attention.

5. FIREFIGHTING PROCEDURES

Flash Point (Method Used): None
NFPA Rating: None established for this product
Extinguisher Media:
Use media suitable to extinguish surrounding fire.
Flammable Limits in Air % by Volume: N/A
Autoignition Temperature: N/A
Special Firefighting Procedures:
Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None

MATERIAL SAFETY DATA SHEET

Revised: 09/05/00
Replaces: None
Printed: 04/12/01

Revised: 09/05/00
Replaces: None
Printed: 04/12/01

MATERIAL SAFETY DATA SHEET

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: Avoid generating dust. Sweep up and dispose of in regular domestic trash. Product is non-hazardous.

7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store tightly closed in a cool dry area suitable for general media storage.

8. SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type): None needed under normal conditions.
None needed under normal conditions of use with adequate ventilation.
NIOSH approved equipment should be worn if PPEs are exceeded.
Ventilation:

Local Exhaust: Yes
Mechanical (General): Yes
Special: No
Other: No

Protective Gloves: None normally required

Eye Protection: Splash proof chemical safety goggles should be worn at all times.
Other Protective Clothing or Equipment: Lab coat, eye wash, and safety shower.

9. PHYSICAL DATA

Molecular Weight: Does not apply. Product is a mixture.
Melting Point: N/A
Boiling Point: N/A
Vapor Pressure: N/A
Vapor Density (Air=1): N/A
Specific Gravity (H2O=1): N/A
Percent Volatile by Volume: 0%
Evaporation Rate (H2O=1): 0
Solubility in Water: Slightly soluble
Appearance and Odor: White, or blue, flakes and powder with no odor

10. REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Avoid creating dust
Incompatibility (Materials to Avoid): None known
Hazardous Decomposition Products: None expected
Hazardous Polymerization: Will not occur

11. TOXICITY DATA

Toxicity Data: This product is non-toxic.
Effects of Overexposure:
Acute: See section 3
Chronic: None found
Conditions Aggravated by Overexposure: N/A

Target Organs: N/A
Primary Route(s) of Entry: N/A

12. ECOLOGICAL DATA

EPA Waste Numbers: N/A

13. DISPOSAL INFORMATION

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and local regulations.
Always contact a permitted waste disposer (TSD) to assure compliance.

14. TRANSPORT INFORMATION

N/A

15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory: N/A
Hazard Category for SARA Section 311/312 Reporting: N/A

Product or Components	SARA EHS Sec. 302	Chemicals Name	SARA Sec. 313	CERCLA Sec. 103	RCRA Sec.
261.33	TPQ	Chemicals	List	Category	KG lbs.

16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary
ACGIH.....American Conference of Governmental Industrial Hygienists
CAS Number.....Chemical Service Abstract Number
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act
DOT.....U.S. Department of Transportation
IARC.....International Agency of Research on Cancer
N/A.....Not Available
NTP.....National Toxicology Program
OSHA.....Occupational Safety and Health Administration
PEL.....Permissible Exposure Limit
PPM.....parts per million
RCRA.....Resource Conservation and Recovery Act
SARA.....Superfund Amendments and Reauthorization Act
TIV.....Threshold Limit Value
TSCA.....Toxic Substances Control Act



**Fisher
Scientific**

**ACROS
ORGANICS**

MSDS

**IMPORTANT SAFETY INFORMATION -- DO NOT DISCARD.
PLEASE ROUTE TO COMPANY SAFETY OFFICER.**

DUBUQUE COUNTY HISTORICAL
SOCIETY
350 EAST THIRD STREET
ATTN LEE JACKSON

DUBUQUE

IA 52001

5,584

IF NAME AND/OR ADDRESS HAVE CHANGED, CONTACT YOUR
SALES REPRESENTATIVE OR LOCAL BRANCH.

FOR EACH CHEMICAL, A MSDS SHEET WILL BE SENT ONLY ON THE
FIRST SHIPMENT UNLESS A SUBSTANTIAL REVISION OCCURS.

REQUIRED MATERIAL SAFETY DATA SHEETS (MSDS) NOT INCLUDED IN
THIS MAILING WILL FOLLOW UNDER SEPARATE COVER.

THIS PACKET MAY CONTAIN MSDS FOR PRODUCTS MANUFACTURED BY
OTHERS AND DISTRIBUTED BY FISHER SCIENTIFIC COMPANY OR ACROS
ORGANICS. THESE MSDS WERE PREPARED BY THE MANUFACTURER
AND FISHER/ACROS DISCLAIMS ALL LIABILITY FOR THE CONTENT.

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AVAILABLE ELECTRONICALLY THROUGH CHEMEXPRESS®.
CHEMEXPRESS IS OBTAINABLE ON CD OR DISKETTES; WINDOWS OR
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ORDERING INFORMATION, PLEASE CALL 1-800-766-7000.**

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CONTACT YOUR LOCAL FISHER BRANCH FOR FILMS, BROCHURES, CATALOGS AND PRODUCTS.
THE NEW ACROS ORGANICS CATALOG OFFERS ONE OF THE BROADEST LINES OF ORGANIC CHEMICALS
IN THE WORLD. CONTACT YOUR LOCAL FISHER BRANCH TO PLACE AN ORDER, TO RECEIVE A CATALOG
OR TO RECEIVE A FREE SUBSCRIPTION TO THE ACROS ORGANICS ACTA.

*** MATERIAL SAFETY DATA SHEET ***

Ammonium Formate
 01240

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Ammonium Formate
 Catalog Numbers:
 A666-500, NC9520565, NC9615381, XXAG666150LB
 Synonyms:
 Formic Acid Ammonium Salt
 Company Identification:
 Fisher Scientific
 1 Reagent Lane
 Fair Lawn, NJ 07410
 For information, call: 201-796-7100
 Emergency Number: 201-796-7100
 For CHEMTREC assistance, call: 800-424-9300
 For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	ELINECS#
540-69-2	AMMONIUM FORMATE	100	208-753-9
Hazard Symbols: XI			
Risk Phrases: 36/38			

**** SECTION 3 - HAZARDS IDENTIFICATION ****

Appearance: white solid
 Caution! Hygroscopic (absorbs moisture from the air). The
 toxicological properties of this material have not been fully
 investigated. May cause respiratory and digestive tract irritation.
 Causes eye and skin irritation.
 Target Organs: None.

Potential Health Effects

Eyes: Causes eye irritation.
 Skin: Causes skin irritation.
 Ingestion: May cause gastrointestinal irritation with nausea, vomiting and
 diarrhea. The toxicological properties of this substance have not
 been fully investigated.
 Inhalation: Causes respiratory tract irritation. Low hazard for usual
 industrial handling.
 Chronic: No information found.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes: Flush eyes with plenty of water for at least 15 minutes.
 Skin: Occasionally lifting the upper and lower eyelids. Get medical aid.
 Flush skin with plenty of water for at least 15 minutes while
 removing contaminated clothing and shoes. Get medical aid if
 irritation develops or persists. Wash clothing before reuse.
 Ingestion: If victim is conscious and alert, give 2-4 cups of milk or water.
 Never give anything by mouth to an unconscious person. Get medical
 aid.
 Inhalation: Remove from exposure and move to fresh air immediately. If not
 breathing, give artificial respiration. If breathing is difficult,
 give oxygen. Get medical aid if cough or other symptoms appear.
 Notes to Physician: Treat symptomatically and

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information: wear a self-contained breathing apparatus in
 pressure-demand (SCBA) mode (approved or equivalent), and full
 protective gear. During a fire, irritating and highly toxic gases
 may be generated by thermal decomposition or combustion. This
 material in sufficient quantity and reduced particle size is capable
 of creating a dust explosion.
 Extinguishing Media:
 in case of fire, use water, dry chemical, chemical foam, or
 alcohol-resistant foam.
 Autoignition Temperature: Not applicable.
 Flash Point: Not applicable.

Explosion limits, lower: Not available.
 Explosion limits, upper: Not available.
 NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated
 in Section 8.
 Spills/Leaks:
 Vacuum or sweep up material and place into a suitable disposal
 container. Avoid generating dusty conditions. Provide ventilation.

**** SECTION 7 - HANDLING AND STORAGE ****

Handling:
 Use with adequate ventilation. Avoid contact with skin and eyes.
 Keep container tightly closed. Avoid ingestion and inhalation.
 Storage:
 Keep from contact with oxidizing materials. Store in a cool, dry,
 well-ventilated area away from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:
 Good general ventilation should be sufficient to control airborne
 levels.

Exposure Limits			
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
AMMONIUM FORMATE	none listed	none listed	none listed

OSHA Vacated PELs:
 AMMONIUM FORMATE:
 No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin
 exposure.
 Clothing: Wear appropriate protective clothing to minimize
 contact with skin.
 Respirators: Follow the OSHA respirator regulations found in 29
 CFR 1910.134 or European Standard EN 149. Always use
 a NIOSH or European Standard EN 149 approved
 respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Solid
 Color: colorless
 Odor: 6-7 at 5% solution.
 pH: 1 mm Hg @ 20 C.
 Vapor Pressure: Not available.
 Vapor Density: Negligible.
 Evaporation Rate: Not available.
 Volatility: Not available.
 Freezing/Melting Point: 180 deg C
 Boiling Point: 119 deg C
 Decomposition Temperature: Completely soluble in water.
 Solubility in water: 1.28
 Specific Gravity/Density: 1.28
 Molecular Formula: NH4COOH
 Molecular Weight: 63.0405

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
 Stable at room temperature in closed containers under normal storage
 and handling conditions.
 Conditions to Avoid:
 Moisture, excess heat, strong oxidants.
 Incompatibilities with Other Materials:
 Strong oxidizing agents.
 Hazardous Decomposition Products:
 Nitrogen oxides, carbon monoxide, carbon dioxide, ammonia.
 Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Free All

Product Code: RE 12 06-334-12

Product Type: Aerosol

Product Use: Lubricant

Manufacturer: Federal Process Corporation

Revision Date: 6/29/2011

Address: 4520 Richmond Road
Cleveland, Ohio 44128

Phone: 1-800-846-7325

NOTE: The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Federal Process Corporation provides this information as guidance for providing personal protection to your employees. The user has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. The user must meet all applicable safety and health standards. Federal Process Corporation provides this information as guidance for providing personal protection to your employees.

2.

Composition / Information on Ingredients

Ingredients	CAS #	Percent
Carbon Dioxide	124-38-9	.1-10 %
Petroleum Oil	64742-52-5	25-35%
Oleic Acid	112-80-1	25-35%
Methy Isobutyl Ketone	108-10-1	
25-35%		

3. Hazards Identification

CAUTION! CONTENTS UNDER PRESSURE EXTREMELY FLAMMABLE

Odor/Appearance: Clear to yellow amber mist as dispensed from aerosol can.

Potential health effects

Routes of exposure: Skin, eyes, inhalation, ingestion.

Eye Contact:

May cause immediate or delayed irritation. Irritation may show up as redness and/or swelling.
May cause corneal damage.

Skin Contact:

Repeated or prolonged contact with skin may produce redness, irritation and/or dryness. May cause or aggravate dermatitis or other existing skin condition.

5. Fire Fighting Measures

Flash Point: Flash point 77 degrees F (closed cup)

Flammable limits in air, % by volume:

Upper: No Information

Lower: No Information

Extinguishing Media:

Dry chemical, carbon dioxide, halon, or foam is recommended. Water spray may be used to cool containers or structures. Halon may decompose into toxic materials and carbon dioxide will displace oxygen, take proper precautions when using these materials.

Unusual Fire & Explosion Hazards:

This material may be ignited by extreme heat, sparks, flames or other ignition sources (static electricity). Vapors are heavier than air and will collect in low areas (sewers) or travel considerable distances. If containers are not cooled in a fire, they may rupture and ignite.

Special Fire Fighting Procedures:

At elevated temperatures (over 130F) aerosol container may burst, vent or rupture; use equipment or shielding to protect personnel. Cooling exposed containers with streams of water may be helpful. Emergency responders should wear self-contained breathing apparatus. Wear other protective gear as conditions warrant. Keep unauthorized people out and try to contain spills or leaks if it can be done safely. Material will float on water, avoid spreading the fire.

6. Accidental Release Measures

Spill or Leak Instructions

Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area. Clean up small spills by using a nonflammable absorbent or flushing sparingly with water. Contain larger spills with nonflammable diking or absorbent. Clean up by vacuuming or sweeping.

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.

7. Handling and Storage

Handling:

Store below 120°F in cool, dry area, out of direct sunlight and away from strong oxidizers. Do not puncture or burst. Use in accordance with good work place practices. Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

Empty containers may contain residues from the product. Treat empty containers with the same precautions as the material last contained. Do not cut, weld or apply heat to empty containers Do not incinerate

Storage:

Store in a cool, dry area, away form heat or direct sunlight. Keep containers closed when not in use. Do not store with incompatible materials

8. Exposure Controls / Personal Protection

Protective Equipment:

Use synthetic gloves if necessary to prevent excessive skin contact. Do not wear contacts and always use ANSI approved safety glasses or splash shield.

Engineering Controls:

General or dilution ventilation is frequently sufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Use a NIOSH approved respirator if ventilation is not adequate to maintain exposures below TLV levels.

Respiratory Protection:

Use adequate ventilation to maintain exposure limits. If the exposure limits of the products or any of its components is exceeded, an approved organic vapor mask should be used (consult your safety equipment supplier). Above 1000 ppm, an approved self-contained breathing apparatus or airline respirator with full face-piece is required

Other Suggested Equipment:

Eye wash station and emergency showers should be available. Spill containment equipment should be available.

Discretion Advised:

Federal Process Corporation, takes no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

Exposure guidelines:

Ingredients	CAS #	Percent	Exposure Limits
Carbon Dioxide	124-38-9	.1-10 %	OSHA (PEL) 5000 ppm ACGIH TLV 5000
Petroleum Oil	64742-52-5	25-35%	TVL Oil Mist 5mg/m3
Oleic Acid	112-80-1	25-35 %	None established
Methy Isobutyl Ketone	108-10-1	25-35 %	OSHA (TWA) 50 ppm ACGIH (TLV) 50 ppm

9. Physical and Chemical Properties

Boiling Point: NA
Vapor Density: >1(Air=1)
Odor/Appearance: Clear to yellow/amber mist as dispensed from aerosol can.
Evaporation Rate: Ether = 1 Slower
Specific Gravity: <1
Water Solubility: Emulsifies

10. Stability and Reactivity

Stability: Stable
Conditions to Avoid: Heat, spark, and open flame
Incompatibility: Strong-Oxidizing Agents
Hazardous Decomposition: Combustion will produce Carbon Monoxide, Carbon Dioxide and nitrogen-oxygen compounds.
Hazardous Polymerization: Will not occur

11. Toxicological Information

Component Toxicological Information:

112-80-1

Oral Rat LD50: 25gm/kg
IrritationRabbit 500 mg open mild

108-10-1

Oral	Rat	LD50	2080 mg/kg
Inhalation	Rat	LC50	100g/m3
Acute dermal toxicity	Rabbit	LD50	1600 mg/kg
Skin irritation	rabbit	Mild Skin Irritation	
Eye	Rabbit	Moderate eye irritation	

No data

12. Ecological Information

N/A

13. Disposal Considerations

Do not puncture or burn containers. Give empty, leaking, or full containers to disposal service equipped to handle and dispose of aerosol (pressurized) containers. Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. See Section 9 - Physical and Chemical Properties.

14. Transport Information

Ground (US DOT) Consumer Commodity
Class ORM-D, ERG 126
Or
Aerosols (limited quantity),
Class 2.1, ERG 126

AIR (IAIA)
Consumer Commodity, Class 9, UN/ID 8000, Packing 1900, Authorization: Limited Quantity
Vessel
Aerosol (Limited Quantity), class 2, UN No 1950

15. Regulatory Information

Environmental Regulations

SARA 311/312:

Immediate (x) Delayed () Fire (x) Reactive () Sudden Release of Pressure (x)

Section 313

This product contains:

Methy Isobutyl Ketone 108-10-1 25-35 %

All the chemicals used in this product are TSCA listed.
Check with your local regulators to be sure all local regulations are met.

16. Other Information

Hazard ratings This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

NFPA Level 3 Aerosol
:

HMIS Health: 1 Flammability: 4 Reactivity: 0
:

RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

Note:

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Federal Process Corporation makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product.

SAFETY DATA SHEET



Date Issued : 05/28/2015

SDS No : 0798

Date Revised : 05/06/2020

Revision No : 1

Germ-A-Cide 64

Alkyl Dimethylbenzylammonium Chloride	1 - 2	68424-85-1
Octyl Dimethyl Amine Oxide	< 1	2605-78-9
Tetrasodium EDTA	< 1	64-02-8
EDTA Acid	< 1	60-00-4

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: None known.

EXTINGUISHING MEDIA: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Caution: Use of water spray when fighting fire may be inefficient.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SENSITIVE TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain spill. Absorb liquid and place in a sealed container for disposal. Avoid runoff into storm sewers and ditches which lead to waterways.

7. HANDLING AND STORAGE

HANDLING: Follow all SDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Store in original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Showers, eyewash stations and ventilation systems.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields (or goggles).

SKIN: No special technical protective measures are necessary. Wear protective gloves if needed.

RESPIRATORY: None needed with adequate ventilation.

PROTECTIVE CLOTHING: None

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Lemon

COLOR: Yellow

SAFETY DATA SHEET



Date Issued : 05/28/2015

SDS No : 0798

Date Revised : 05/06/2020

Revision No : 1

Germ-A-Cide 64

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Germ-A-Cide 64
GENERAL USE: Disinfectant/Cleaner
PRODUCT CODE: 0798

MANUFACTURER

Detco Industries, Inc.
 PO Box 430
 Conway, AR 72033
Customer Service: 800-282-2133
E-Mail: support@detco.com

24 HR. EMERGENCY TELEPHONE NUMBERS

Poison Control Center (Medical) : (877) 800-5553
CHEMTREC (US Transportation) : (800) 424-9300

EPA REG. NO.: 47371-131-58111

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS**Health:**

Skin Irritation, Category 2
 Eye Irritation, Category 2

GHS LABEL

Exclamation
 mark

SIGNAL WORD: WARNING**HAZARD STATEMENTS**

H315 + H320: Causes skin and eye irritation.

PRECAUTIONARY STATEMENTS**Prevention:**

P264: Wash hands thoroughly after handling.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302+P352: IF ON SKIN: Wash with plenty of water/...
 P332+P313: If skin irritation occurs: Get medical advice/attention.
 P362: Take off contaminated clothing.
 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.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	Wt %	CAS
Water	0 - 100	7732-18-5
Didecyl Dimethyl Ammonium Chloride	2 - 5	7173-51-5



SAFETY DATA SHEET

Date Issued : 05/28/2015

SDS No : 0798

Date Revised : 05/06/2020

Revision No : 1

Germ-A-Cide 64

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Germ-A-Cide 64
GENERAL USE: Disinfectant/Cleaner
PRODUCT CODE: 0798

MANUFACTURER

Detco Industries, Inc.
PO Box 430
Conway, AR 72033
Customer Service: 800-282-2133
E-Mail: support@detco.com

24 HR. EMERGENCY TELEPHONE NUMBERS

Poison Control Center (Medical) : (877) 800-5553
CHEMTREC (US Transportation) : (800) 424-9300

EPA REG. NO.: 47371-131-58111

2. HAZARD IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Irritation, Category 2
Eye Irritation, Category 2

GHS LABEL



Exclamation
mark

SIGNAL WORD: WARNING

HAZARD STATEMENTS

H315 + H320: Causes skin and eye irritation.

PRECAUTIONARY STATEMENTS

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Alkyl Dimethylbenzylammonium Chloride	1 - 2	68424-85-1
Octyl Dimethyl Amine Oxide	< 1	2605-78-9
Tetrasodium EDTA	< 1	64-02-8
EDTA Acid	< 1	60-00-4

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: None known.

EXTINGUISHING MEDIA: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Caution: Use of water spray when fighting fire may be inefficient.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SENSITIVE TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain spill. Absorb liquid and place in a sealed container for disposal. Avoid runoff into storm sewers and ditches which lead to waterways.

7. HANDLING AND STORAGE

HANDLING: Follow all SDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Store in original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Showers, eyewash stations and ventilation systems.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields (or goggles).

SKIN: No special technical protective measures are necessary. Wear protective gloves if needed.

RESPIRATORY: None needed with adequate ventilation.

PROTECTIVE CLOTHING: None

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Lemon

COLOR: Yellow



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pH: 7.2 to 8.2

Notes: (pH at Use Dilution = 7.0)

FLASH POINT AND METHOD: Not flammable.

FLAMMABLE LIMITS: Not yet determined

VAPOR PRESSURE: Not yet determined

VAPOR DENSITY: Not yet determined

BOILING POINT: > 100°C (212°F)

SOLUBILITY IN WATER: Complete

PARTITION COEFFICIENT: N-OCTANOL/WATER: Not yet determined

EVAPORATION RATE: Not yet determined

SPECIFIC GRAVITY: 1.000 g/mL

(VOC): < 0.1 %

10. STABILITY AND REACTIVITY

REACTIVITY: No data available.

HAZARDOUS POLYMERIZATION: Will not occur.

STABILITY: Stable

CONDITIONS TO AVOID: None known.

POSSIBILITY OF HAZARDOUS REACTIONS: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

INCOMPATIBLE MATERIALS: None known.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Chemical Name	ORAL LD 50	DERMAL LD 50
Didecyl Dimethyl Ammonium Chloride	450	3342

CARCINOGENICITY

NOTES: No data available.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available.

BIOACCUMULATION/ACCUMULATION: No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with federal, state and local regulations.

EMPTY CONTAINER: Do not reuse container.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not regulated by DOT.

15. REGULATORY INFORMATION



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UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

313 REPORTABLE INGREDIENTS: None known.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt. %	CERCLA RQ
EDTA Acid	< 1	5,000

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS	TSCA SECTION
Water	7732-18-5	
Didecyl Dimethyl Ammonium Chloride	7173-51-5	
Alkyl Dimethylbenzylammonium Chloride	68424-85-1	
Octyl Dimethyl Amine Oxide	2605-78-9	8a,
Tetrasodium EDTA	64-02-8	
EDTA Acid	60-00-4	

OTHER INFORMATION

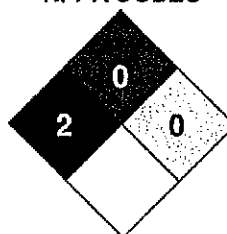
PREPARED BY: E. Spicer Date Revised: 05/06/2020

REVISION SUMMARY: This SDS replaces the 05/06/2020 SDS.

HMIS RATING

HEALTH		2
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION	B	

NFPA CODES



MANUFACTURER DISCLAIMER: The information provided in this Safety Data Sheet has been obtained from sources believed to be reliable. Manufacturer provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein.

Safety Data Sheet
Germ Away

SECTION I - IDENTIFICATION

PRODUCT NAME: Germ Away
PRODUCT CODE: 2170
PRODUCT USE: Disinfectant foaming cleaner
COMPANY NAME: QuestVapco Corporation
COMPANY ADDRESS: PO Box 624 Brenham, TX 77834
COMPANY PHONE: 1-800-231-0454
EMERGENCY PHONE: 800-255-3924

SECTION II - HAZARDS IDENTIFICATION

CLASSIFICATION: Flammable Aerosol: Category 2

Liquefied Gas

Eye Irritant: Category 2b

HAZARD STATEMENT(S): **WARNING:** Flammable Aerosol Contains gas under pressure; May explode if heated. Causes eye irritation.

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. Do not spray on an open flame or other ignition source. 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.



SYMBOL:

HAZARDS NOT OTHERWISE CLASSIFIED: N/A

SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	PERCENT
2-Butoxyethanol	111-76-2	5-10%
Propane/n-Butane	68476-86-8	3-7%
Isopropyl Alcohol	67-63-0	1-5%
Ethylenediaminetetraacetic Acid (EDTA)	60-00-4	.5-1.5%
Potassium Hydroxide	1310-58-3	.5-1.5%

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: Do not induce vomiting unless directed by medical authority. Immediately rinse mouth with water. Seek immediate medical attention.

INHALATION: Move to fresh air. If breathing is difficult or unconscious, administer oxygen. If not breathing administer artificial respiration. Seek medical attention if irritation persists.

SKIN: Wash thoroughly with soap and water. Seek medical attention if irritation develops.

ACUTE HEALTH HAZARDS: Eyes: redness, tearing, blurred vision

CHRONIC HEALTH HAZARDS: None known

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, carbon dioxide, foam, water spray for cooling.

UNSUITABLE EXTINGUISHING MEDIA: N/A

Safety Data Sheet

Germ Away

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. Avoid breathing smoke, fumes, and decomposition products. Cool fire exposed containers with water fog to prevent bursting.

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: N/A

SECTION VI – ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Refer to section VIII for proper Personal Protective Equipment.

SPILL: Absorb spill with non-combustible material such as vermiculite, sand or earth.

WASTE DISPOSAL: Dispose of in accordance with federal, state, and local regulations. Do not reuse, puncture, or incinerate container. Wrap container and place in trash collection.

RCRA STATUS: Not listed as hazardous waste 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.

OTHER PRECAUTIONS: Keep out of the reach of children.

INCOMPATIBILITY: Strong acids, strong alkalis, strong oxidizing agents.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

HAZARDOUS INGREDIENT	OSHA PEL	ACGIH TLV
2-Butoxyethanol	50 ppm	20 ppm
Propane/n-Butane	1000 ppm	1000 ppm
Isopropyl Alcohol	500 ppm	400 ppm
Ethylenediaminetetraacetic Acid (EDTA)	15 mg/m3	Not Established
Potassium Hydroxide	2 mg/m3	2 mg/m3

ENGINEERING CONTROLS / VENTILATION: General ventilation and local exhaust recommended.

RESPIRATORY PROTECTION: Not required under normal use. If exposure levels are exceeded then organic vapor cartridge respirator or SCBA will be needed.

PERSONAL PROTECTIVE EQUIPMENT: Safety glasses and chemical resistant gloves

ADDITIONAL MEASURES: Wash hands thoroughly after handling.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White Foam Aerosol

ODOR: Citrus scent, moderate ammonia odor

ODOR THRESHOLD: N/D

BOILING POINT: > 212°F (100°C)

FREEZING POINT: < 32°F (0°C)

FLAMMABILITY: Flammable Aerosol

FLASH POINT: N/D

AUTOIGNITION TEMPERATURE: N/D

LOWER FLAMMABILITY LIMIT: N/D

UPPER FLAMMABILITY LIMIT: N/D

VAPOR PRESSURE (mm Hg): 17.5 @ 77°F (25°C)

VAPOR DENSITY (AIR=1): < 1

EVAPORATION RATE: < 1

SPECIFIC GRAVITY (H2O=1): 1.00 @ 77° F (25° C)

pH: 12.3

SOLIDS (%): 3%

SOLUBILITY IN WATER: 100%

PARTITION COEFFICIENT: n-OCTANOL/WATER (K_{ow}): N/D

Safety Data Sheet
Germ Away

VOLATILITY INCLUDING WATER (%): > 80%
VOLATILE ORGANIC COMPOUNDS (VOC): 16%
DIELECTRIC STRENGTH (Volts): N/A
DECOMPOSITION TEMPERATURE: N/D
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: Strong acids, strong alkalis, strong oxidizing agents.
HAZARDOUS DECOMPOSITION OR BY-PRODUCT: Oxides of carbon
POSSIBLE HAZARDOUS REACTIONS: None Known

SECTION XI – TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: 2-Butoxyethanol (111-76-2) LD₅₀ (Oral, Rat) 470 mg/kg; LC₅₀ (Inhalation, Rat, 4hr) 450 ppm; LD₅₀ (Dermal, Rabbit) 220 mg/kg Isopropyl Alcohol (67-63-0) LD₅₀ (Oral, Rat) 5045 mg/kg; LD₅₀ (Oral, Rabbit) 5045 mg/kg; LD₅₀ (Dermal, Rabbit) 12,800 mg/kg; LC₅₀ (Inhalation, Rat, 8hr) 16,000 ppm
ROUTES OF ENTRY: Eyes, Ingestion, Inhalation, Skin
EYES: Causes mild irritation.
INGESTION: May cause gastrointestinal irritation, abdominal cramps.
INHALATION: Irritant. Avoid breathing spray mist. May cause irritation to respiratory tract.
SKIN: May cause mild irritation, dryness with prolonged or repeated contact.
MEDICAL CONDITION AGGRAVATED: None known
ACUTE HEALTH HAZARDS: Eyes: redness, tearing, blurred vision
CHRONIC HEALTH HAZARDS: None known
CARCINOGENICITY: OSHA: No ACGIH: No NTP: No IARC: No OTHER: No

SECTION XII – ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Isopropyl Alcohol (67-63-0) LC₅₀ (Fathead Minnow, 96 hrs) 100,000 mg/L
BIODEGRADABILITY: Component or components of this product are not biodegradable.
BIOACCUMULATION: This product is not expected to bioaccumulate.
SOIL MOBILITY: This product is mobile in soil.
OTHER ECOLOGICAL HAZARDS: None Known

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Dispose of in accordance with federal, state, and local regulations. Do not reuse, puncture, or incinerate container. Wrap container and place in trash collection.
RCRA STATUS: Not listed as hazardous waste 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: 2.1
UN/NA NUMBER: UN 1950
PACKAGING GROUP: N/A

AIR SHIPMENT

PROPER SHIPPING NAME: Aerosols, Ltd. Qty.
HAZARD CLASS/DIVISION: 2.1
UN/NA NUMBER: UN 1950
PACKAGING GROUP: N/A

Safety Data Sheet

Germ Away

SHIPPING BY WATER:

VESSEL (IMO/IMDG)

PROPER SHIPPING NAME: Aerosols, Ltd. Qty.

HAZARD CLASS/DIVISION: 2.1

UN/NA NUMBER: UN 1950

PACKAGING GROUP: N/A

ENVIRONMENTAL HAZARDS WATER: N/A

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:

SARA 313 REPORTABLE INGREDIENTS: 2-Butoxyethanol (111-76-2)

CLEAN WATER ACT: None

STATE REGULATIONS: California Proposition 65: None 2-Butoxyethanol (111-76-2) Right-to-Know acts for New Jersey, Massachusetts, Pennsylvania, Rhode Island, Illinois, Florida, Minnesota; Massachusetts spill list

INTERNATIONAL REGULATIONS: 2-Butoxyethanol (111-76-2) Europe (EINECS), Japan (ENCS), Australia (AICS), WHMIS (Canada), DSCL (EEC), NDSL, Korea (ECL), Philippines (PICCS), New Zealand (NZIOC), China (IECS).

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. Harmful if swallowed or absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Contents under pressure. Do not use or store near heat or open flame. Exposure to temperatures above 130°F may cause bursting. Never throw container into fire or incinerator.

EPA Reg. No. 44446-23

NFPA HEALTH: 1

NFPA FLAMMABILITY: 0

NFPA REACTIVITY: 1

NFPA OTHER: None

HMIS HEALTH: 1

HMIS FLAMMABILITY: 0

HMIS REACTIVITY: 1

HMIS PROTECTION: A

SECTION XVI - ADDITIONAL INFORMATION

PREPARATION BY: Jonathon Jarvis

DATE PREPARED: 12/04/2013

REVISION DATE: 04/24/2015

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.