Material Safety Data Sheet
(MSDS)

PROPYLENE GLYCOL USP

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PROPYLENE GLYCOL USP

Number: 000000000000499204

Chemical characterization: Glycols

CAS-No.: 57-55-6

Chemical Name: 1,2-Propanediol

Synonyms: Propylene Glycol, 1,2-Propanediol, 1,2-Dihydroxypropane, Monopropylene Glycol

Company Address
Lyondell Chemical Company
One Houston Center, Suite 700
1221 McKinney St.
P.O. Box 2583
Houston Texas 77252-2583

Company Telephone
Customer Service 888 777-0232
Product Safety 800 700-0946
product.safety@lyondellbasell.com

Emergency telephone
CHEMTREC USA 800-424-9300
LYONDELL 800-245-4532

2. HAZARDS IDENTIFICATION

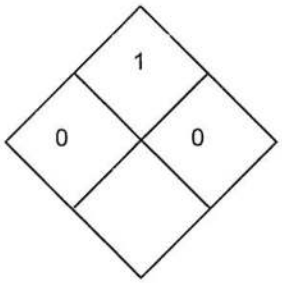
Emergency Overview

This material is NOT HAZARDOUS by OSHA Hazard Communication definition.

Hazards

Slightly combustible liquid. Do not handle near heat, sparks, or open flame. May cause minor eye irritation. High aerosol concentrations may cause mild irritation of the nose and throat as well as central nervous system depression. Not expected to cause skin irritation. Not expected to be a sensitizer.

NFPA®



HMIS®

Health	0
Flammability	1
Physical Hazard	0

Physical state
liquid

Color
Clear, colorless.

Odor
Little or no odor.

Odor Threshold
No value available.

Potential health effects

Routes of exposure
Eye. Inhalation. Skin.

Acute effects
See component summary.

- *Propylene Glycol 57-55-6*

May cause minor eye irritation. High aerosol concentrations may cause mild irritation of the nose and throat as well as central nervous system depression.

Skin
Not a skin irritant. Not expected to be a sensitizer.

Inhalation
High aerosol concentrations may cause mild reversible irritation of the nose and throat as well as CNS depression (primarily fatigue, dizziness and possibly loss of concentration, with collapse, coma and death possible in cases of severe over exposure).

Eyes
May cause minor eye irritation. Effects of eye irritation are reversible.

Ingestion
Ingestion of high doses may cause discomfort and irritation of the gastrointestinal tract and CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

Chronic effects
See component summary.

- *Propylene Glycol 57-55-6*

Repeated or prolonged exposure of the skin to this material may cause defatting and drying of the skin. Prolonged or repeated breathing of high concentrations may cause symptoms of central nervous system depression.

Aggravated Medical Condition
This material or its emissions may aggravate pre-existing eye disease.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	EC-No.	Weight %
Propylene Glycol	57-55-6	200-338-0	> 99.5

Typical composition

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

4. FIRST AID MEASURES

General advice
Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific

General advice
information refer to the Emergency Overview in Section 2 of this MSDS.

Skin
Not expected to present a significant skin hazard under anticipated conditions of normal use. If skin contact occurs, remove contaminated clothing and wash skin thoroughly.

Inhalation
Not expected to present a significant inhalation hazard under anticipated conditions of normal use. If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.

Eyes
Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion
If large quantity swallowed, give lukewarm water (pint/ 1/2 litre) if victim completely conscious/alert. Do not induce vomiting. Risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention.

Notes to physician
Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Flammable properties

Classification
OSHA/NFPA Class IIIB combustible liquid.

Flash point
104 °C (219.2 °F)

Autoignition temperature
> 400 °C (752 °F)

Lower explosion limit
~ 2 vol%

Upper explosion limit
~ 17 vol%

Extinguishing Media

Suitable extinguishing media
SMALL FIRE: Use dry chemicals, CO_2, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

Unsuitable extinguishing media
Do not use solid water stream.

Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters
Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

Precautions for fire-fighting
Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open

Precautions for fire-fighting
or explode if confined. May travel long distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be combustible at temperatures below normal flash point. Aqueous solutions containing less than 95% propylene glycol by weight have no flash point as obtained by standard test methods. However aqueous solutions of propylene glycol greater than 22% by weight, if heated sufficiently, will produce flammable vapors. Always drain and flush systems containing propylene glycol with water before welding or other maintenance. Refer to NFPA Code 13 for guidance in using propylene glycol in sprinkler system applications. Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Hazardous combustion products
Incomplete combustion may produce carbon monoxide and other toxic gases.

6. ACCIDENTAL RELEASE MEASURES

Spills and leaks
Extinguish ignition sources; stop release; prevent flow to sewers or public waters. Notify fire and environmental authorities. Impound/recover large land spill; soak up small spill with inert solids. Soak up small spills with inert solids. Use suitable disposal containers. On water, material is soluble and may float or sink. Contain/collect rapidly to minimize dispersion. Disperse residue to reduce aquatic harm. Report per regulatory requirements.

Try to prevent the material from entering drains or water courses.

7. HANDLING AND STORAGE

Handling
Handle empty containers with care - residue can burn if heated. Empty containers should be thoroughly rinsed with copious amounts of clean water. The rinse water can be used for makeup water for any necessary dilution of the concentrated product before use, or it can be properly discarded.

Storage
Mild or stainless steel. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Store at 65-90°F (18-32°C). Use dry nitrogen or low dew point air for tank padding.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls
No special ventilation is recommended under anticipated conditions of normal use beyond that needed for normal comfort control.

Personal protective equipment

Inhalation
No special respiratory protection is recommended under anticipated conditions of normal use with adequate ventilation. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Skin
Wear chemical resistant gloves such as: Neoprene. No special clothing/skin protection equipment is recommended under normal conditions of anticipated use. Where use can result in skin contact, practice good personal hygiene.

Eyes

Eyes
Use splash goggles when eye contact due to splashing or spraying liquid is possible.

Remarks
Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Take off contaminated clothing and wash before reuse.

Occupational Exposure Limits

Consult local authorities for acceptable exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid Clear, colorless.

Odor: Little or no odor.

Odor Threshold: No value available.

pH: ~ 7

Boiling point/boiling range: ~ 184 °C (363.2 °F) @ 760 mm Hg

Melting/freezing point: < -20 °C (-4 °F)

Flash point: 104 °C (219.2 °F)

Autoignition temperature: > 400 °C (752 °F)

Flammability: OSHA/NFPA Class IIIB combustible liquid.

Lower explosion limit: ~ 2 vol%

Upper explosion limit: ~ 17 vol%

Explosive properties: Not explosive

Oxidizing properties: Not considered an oxidizing agent.

Vapor pressure: ~ 0.08 mm Hg @ 20 °C (68 °F)

Evaporation rate: No Data Available.

Relative density: 1.03 @ 20 °C (68 °F)

Relative vapor density: ~ 2 (Air = 1.0 at 15 - 20°C/59 - 68°F)

Viscosity: 43.4 mPa.s @ 25 °C (77 °F)
42.13 mm2/s @ 25 °C (77 °F)

Water solubility: @ 20 °C (68 °F) Complete (In All Proportions).

Partition coefficient: n-octanol/water: @ 20.5 °C (68.9 °F)

Other physico-chemical properties: Volatile Characteristics: Slight: 0.1 to 1.0% Hygroscopic. Additional properties may be listed in Sections 2 and 5.

10. STABILITY AND REACTIVITY

Chemical stability
This material is stable when properly handled and stored.

Conditions to avoid
High temperatures, oxidizing conditions. May degrade when exposed to light or other radiation sources.

Materials to avoid
Reacts with strong oxidizing agents. Strong acids. Isocyanates.

Hazardous decomposition products
Carbon Monoxide and other toxic vapors.

Hazardous polymerization
Not expected to occur.

Reactions with Air and Water
Not expected to occur.

11. TOXICOLOGICAL INFORMATION

Product information

Product Summary
Propylene glycol is of low acute toxicity after ingestion or skin contact. It is not a skin irritant, although repeated contact with undiluted product may dry the skin resulting in cracking and/or fissuring. It is not a skin sensitizer, however skin reactions of unknown etiology have been described in some hypersensitive individuals following topical application. Neat liquid may also produce minimal, fully reversible eye irritation. Propylene glycol is of low inherent toxicity in rats and dogs after repeated oral exposure, while cats show species-specific hematological changes in red blood cells (other tissues unremarkable). Rats exposed repeatedly to high aerosol concentrations exhibited signs consistent with irritation of the eyes and nasal mucosa but showed no evidence of systemic toxicity. Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not a teratogen while no adverse effect on reproductive performance was apparent in male and female mice exposed continuously to high doses of propylene glycol in drinking water for up to 3 months. It is not genotoxic in vitro or in vivo. There was no increase in tumors in rats or dogs exposed to high concentrations of propylene glycol via the diet for up to 2 years, while the incidence of skin tumors was unaltered in mice following dermal application over a lifetime.

Acute toxicity

COMPONENT INFORMATION

- *Propylene Glycol 57-55-6*

Acute toxicity

LD50 (Oral)	rat	22,000 MG/KG BWT

LD50 (Skin) rabbit 2,000 MG/KG BWT

Target Organs
Skin. Repeated or prolonged contact with skin may cause defatting and drying of the skin which may result in dermatitis.

Repeated dose toxicity
Long-term studies in rodents conducted with high oral doses found no evidence of adverse effects. Ingestion by cats, however, results in species-specific hematological changes.
High aerosol concentrations inhaled by rats caused minor nasal and ocular signs that may have been due to mild irritation or drying effects on mucous membranes.

Reproductive effects
No adverse effect on reproductive performance was seen in male and female mice exposed continuously to high doses of propylene glycol in drinking water for up to 3 months.

Developmental Toxicity
Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not teratogenic or fetotoxic.

Genetic Toxicity
Negative for genotoxicity using both in vitro and in vivo tests.

Carcinogenicity
No increase in tumors was noted in rats and dogs exposed to high concentrations of propylene glycol via the diet for up to 2 years. The incidence of skin tumors was unaltered in mice following dermal application over a lifetime. Not listed by IARC, NTP, OSHA or EPA.

12. ECOLOGICAL INFORMATION

Product information

Ecotoxicity

This material is expected to be non-hazardous to aquatic species.

Environmental fate and pathways

This material is not expected to persist in the environment and should pose little if any physical or toxicological hazards. See component summary.

COMPONENT INFORMATION

- *Propylene Glycol 57-55-6*

Ecotoxicity

This material is expected to be non-hazardous to aquatic species.

Acute Fish toxicity
LC50 / 96 HOUR Oncorhynchus mykiss (rainbow trout) 40,613 mg/l

Acute toxicity to aquatic invertebrates
EC50 / 48 HOUR Ceriodaphnia dubia 18,340 mg/l

EC50 / 96 HOUR Americamysis bahia (Mysid shrimp) 18,800 mg/l

Toxicity to aquatic plants
EC50 / 96 HOUR Pseudokirchneriella subcapita (formerly Selenastrum capricornutum) 19,000 mg/l

EC50 / 96 HOUR Skeletonema costatum 19,100 mg/l

Toxicity to microorganisms
NOEC / 18 HOUR Pseudomonas putida 20,000 mg/l

Chronic toxicity to fish

Summary: Not expected to exhibit chronic toxicity to fish.

Chronic toxicity to aquatic invertebrates
EC10 / 7 DAY Ceriodaphnia dubia 13,020 mg/l

Environmental fate and pathways

Mobility
Behavior in environmental compartments: Environmental releases of propylene glycol will tend to partition to water and soil, with little potential for evaporation.

Persistence and degradability
Biodegradation: Readily biodegradable in aerobic conditions. There is evidence that it is degraded under anaerobic conditions.

Bioaccumulation: Bioconcentration factor (BCF) 0.09 This material is not expected to bioaccumulate.

Other adverse effects
No additional information available.

13. DISPOSAL CONSIDERATIONS

Comply with federal, state, or local regulations for disposal. Landfill solids at permitted sites. Burn concentrated liquids, diluting with clean, low viscosity fuel. Avoid flameouts and assure that emissions comply with all applicable standards/regulations. Dilute aqueous waste may biodegrade. Assure effluent complies with applicable regulations.

14. TRANSPORT INFORMATION

Special Provisions
If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in the composition section of this sheet, based on final composition of your product.

Proper shipping name PROPYLENE GLYCOL, not regulated

15. REGULATORY INFORMATION

Notification status

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
Philippines	PICCS
United States of America	TSCA
New Zealand	NZIoC

Contact product.safety@lyondellbasell.com for additional global inventory information.

If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

SARA 311/312

Based upon available information, this material is not classified as a health and/or physical hazard according to Section 31 1 & 312.

SARA 313

This product contains no known chemicals regulated under SARA 313.

State Reporting

This product contains no known chemicals regulated by California's Proposition 65.

This product contains the following chemicals regulated by New Jersey's Worker and Community Right to Know Act:

57-55-6 Propylene Glycol

No components are subject to the Massachusetts Right to Know Act.

This product contains the following chemicals regulated by Pennsylania's Right to Know Act:

57-55-6 Propylene Glycol

16. OTHER INFORMATION

Material safety datasheet sections which have been updated:
Last revision: Logo change. November 3 2010

Disclaimer

This document is generated for the purpose of distributing health, safety, and environmental data.
Information is correct to the best of our knowledge at the date of the MSDS publication.
It is not a specification sheet nor should any displayed data be construed as a specification.
The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods

Disclaimer

of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.

Numerical Data Presentation

The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg.

Language Translations

This document may be available in languages other than English.

End of Material Safety Data Sheet

MATERIAL SAFETY DATA SHEET
THE HALLSTAR COMPANY

Section 1 - Identification of Substance and Company

Product Name: OP-100 V Sodium Stearate **Product Code: 0284**
Chemical Name: Sodium Stearate

Supplier: The HallStar Company [1]
120 S. Riverside Plaza Suite 1620
Chicago, IL 60606 PH: 877-427-4255
USA

HMIS
Health: 1
Flammability: 0
Reactivity: 0
Gloves, Safety Glasses & Dust Mask

Information: (908) 852-6128
Emergency: CHEMTREC (800) 424-9300

Section 2 - Information on Ingredients

Chemical Name	CAS#
Sodium Stearate	822-16-2

Section 3 - Hazard Identification

Appearance/Odor: Fine white crystalline powder; fatty odor

Potential Health Effects
Skin Contact: Prolonged contact may cause irritation.
Eye Contact: May cause slight eye irritation of susceptible persons.
Ingestion: Unknown.
Inhalation: Dust may be cause irritation.

Section 4 - First Aid Measures

Skin Contact: Remove contaminated clothing and wash affected skin with soap and water.
Eye Contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists, consult a physician.
Ingestion: Induce vomiting and then gargle to clear mouth. Contact a physician.
Inhalation: Person should be moved to a fresh air environment.

Section 5 - Explosion and Fire-Fighting Measures

Extinguishing Media: CO_2, Dry Chemical, Foam
Special Fire-Fighting Procedures: A MSHA/NIOSH approved self-contained breathing apparatus should be worn.
Unusual Fire and Explosion Hazards: None

Section 6 - Accidental Release/Spill Procedures

Steps to be Taken in Case Material is Released or Spilled: Sweep up, contain the spill and transfer to separate containers for recovery or disposal. Wash floor area with hot water solution. Remove contaminated clothing and wash before reuse. Wash affected skin areas with soap and water. Keep spills out of all sewers and bodies of water.

Section 7 - Handling and Storage

Containers should be kept tightly closed and stored in a dry well-ventilated location.

Section 8 - Personal Protection

ACGIH Threshold Limit Value (TLV): None
OSHA Permissible Exposure Limit (PEL): None

Hand Protection: Rubber gloves
Respiratory Protection: Dust mask is recommended. Respirator may be required if dusting is a nuisance.
Eye Protection: Safety glasses

Engineering Measures: For normal operation, local exhaust ventilation should suffice. Direct exhaust when material becomes heated and fumes are given off.

Other: Eyewash facility in vicinity.

Section 9 - Physical and Chemical Properties

Boiling Point:	N/A	**Specific Gravity:**	1.02
Flash Point (COC):	350°F	**Melting Point:**	Unknown
Solubility in Water:	Complete	**Vapor Pressure:**	N/A
Vapor Density (air=1):	N/A		
Appearance and Odor:	Fine white crystalline powder; fatty odor		

Section 10 - Stability and Reactivity

Stability: This product is stable under normal conditions.
Conditions to Avoid: Avoid flame or spark under dusting conditions.
Hazardous Decomposition: Thermal decomposition (e.g., fire) will produce carbon dioxide (an asphyxiant at high levels) and may produce carbon monoxide (highly toxic if inhaled).
Material to Avoid: None known.

Section 11 - Toxicological Information

The CIR Panel found Sodium Stearate to be safe as used at levels of up to 25%. (See J. Amer. Coll. Toxicol. (JACT) 1(2): 143-77 (1982)).

Section 12 - Ecological Information

Literature indicates that sodium stearate is readily biodegradable. This product does not contain any ozone depleting compounds (ODC's).

Section 13 - Disposal Considerations

Waste Disposal Methods: Material should be disposed of in accordance to current local, state and federal regulations. Contacting a waste disposal service is recommended.

Section 14 - Transport Information

Not classified as hazardous according to the Department of Transportation.

Section 15 - Regulatory Information

Toxic Substances Control Act (TSCA): This product is in compliance with the TSCA inventory of the United States.

Superfund Amendments and Reauthorization Act (SARA): This product has the following hazards as defined in Section 311/312 of 40 CFR Part 372:

Hazards
None

This product contains the following chemicals subject to the reporting requirements of Section 313 or Title III of SARA and 40 CFR Part 372:

Ingredients
None

European Labeling Phrases:
Risk Phrases – none
Safety Phrases – S24/25-Avoid contact with eyes and skin, S37-Wear suitable gloves, S45-In case of accident or if you feel unwell, seek medical advice immediately, S28A-After contact with skin, wash immediately with plenty of water.

Section 16 - Other Information

Prepared By: AAC

Revision Date: 06/07
Supersedes: 05/07

All information is presented in good faith using available information. The HallStar Company makes no representation of the accuracy or completeness of the information. The user should consider this information as a supplement to other information that may be available. User should also determine suitability of information in their situation to determine proper use and disposal, protection of persons and the environment.

(1) Affiliated companies include RTD*HallStar Company, HallStar Solutions Corp., Ester Solutions Company, Memphis Solutions Company and Marine Magnesium & Minerals Company.

Material Safety Data Sheet

ACME
HARDESTY
OLEOCHEMICALS

450 Sentry Parkway
Blue Bell, PA 19422
www.acme-hardesty.com
Tel: 215.591.3620
Fax: 215.591.3620

PRODUCT NAME: AHCOHOL 1695

CHEMICAL PRODUCT AND DISTRIBUTOR IDENTIFICATION

TRADE NAME:	AHCOHOL 1695
CAS #:	36653-82-4
EINECS#;	253-149-0
DATE:	January 10, 2008
DISTRIBUTOR:	ACME-HARDESTY COMPANY
ADDRESS:	450 Sentry Parkway Blue Bell, PA 19422
TELEPHONE:	(866) 226-3834
FAX:	(215) 591 – 3620
EMERGENCY:	CHEMTREC (800) 424-9300

COMPOSITION / INFORMATION ON INGREDIENTS

COMPOSITION	CHEMICAL FORMULA	CAS#	Wt/Wt, %	EC#	EC SYMBOL/R-PHRASE
1-Hexadecanol	$CH_3(CH_2)_{15}OH$	36653-82-4	98 – 100	253-149-0	- / -
CONTAINS:					
1-Tetradecanol	$CH_3(CH_2)_{13}OH$	112-72-1	0 – 1	204-000-3	- / -
1-Octadecanol	$CH_3(CH_2)_{17}OH$	112-92-5	0 – 1	204-017-6	- / -

SYNONYM: Cetyl Alcohol

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

No hazardous product as specified in Directive 67/548/EEC.

PHYSICAL/CHEMICAL CHARACTERISTICS

FORM:	White waxy solid
ODOR:	Mild fatty odor
Ph:	Not applicable
VISCOSITY DYNAMIC (60°C):	6 – 9 mPa.s
MELTING POINT / MELTING RANGE:	46 – 58°C (115 – 136°F)
BOILING POINT / BOILING RANGE (at 760 mm Hg):	305 – 335°C (581 – 635°F)
VAPOR PRESSURE:	< 1 mm Hg @ 20°C
SOLUBILITY IN WATER:	Almost insoluble at 25°C (77°F)
DENSITY:	0.822g/cm^3 @ 70/70°C (158/158°F)
EXPLOSIVE LIMIT, vol% IN AIR:	Not Available

FIRST AID MEASURES

SKIN CONTACT:	Wash off with plenty of water. Remove contaminated clothing and shoes.
EYE CONTACT:	Rinse with plenty of water for at least 20 minutes with the eyelid held wide open.
INGESTION:	Immediately make victim drink plenty of water. Consult doctor if feeling unwell.
INHALATION:	Move victim to fresh air.

FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:	Carbon dioxide, foam, powder.
SPECIAL RISKS:	Combustible. Vapor heavier than air. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapors possible in the event of fire.
FLASH POINT:	155 – 160°C (311 – 320°F) PMCC
AUTO IGNITION TEMPERATURE:	235 – 252°C (455 – 489°F)

ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:	Avoid generation of dusts; do not inhale dusts. Take up dry. Forward for disposal. Clean up affected area.

HANDLING AND STORAGE

HANDLING:	Use gloves and wear goggles when handling. For bulk handling, ensure all equipment is electrically grounded before beginning of transfer operation.
STORAGE / TRANSPORT PRESSURE:	Ambient
LOAD / UNLOAD TEMPERATURE:	60 – 70°C (140 – 158°F)

EXPOSURE CONTROL / PERSONAL PROTECTION

EXPOSURE LIMIT:	No exposure limits have been established for this product.
PERSONAL PROTECTIVE EQUIPMENT:	Wear protective goggles and/or face shield and rubber gloves.
INDUSTRIAL HYGIENE:	Normal standards of industrial hygiene been observed.

STABILITY AND REACTIVITY

CONDITIONS TO BE AVOIDED:	Strong heating. It decomposes when heated.
HAZARDOUS DECOMPOSITION PRODUCTS:	None. Complete combustion forms carbon dioxide and water.
HAZARDOUS REACTIONS:	Violent reactions possible with strong acids, strong oxidizing agents.

DISPOSAL INFORMATION

Disposal method should be in accordance with local, state, national environment laws and regulations.

Do not let this chemical enter environment.

TOXICOLOGICAL INFORMATION

TOXICITY DATA:	LD_{50} (oral, rat) = > 2000 mg/kg (OECD 401) WHO Acute Hazard : Unlikely to present acute hazard in normal use. LD_{50} (dermal, rabbit) = > 2000 mg/kg (OECD 401)
CARCINOGENICITY FOR CAS# 112-72-1:	Not listed by IARC Carcinogen, U.S. NTP Carcinogens, CA Prop 65 Known Carcinogens, U.S. EPA Carcinogen, TRI Carcinogen.
CHOLINESTERASE INHIBITOR:	No
DEVELOPMENTAL OR REPRODUCTIVE TOXIN:	Not listed by CA Prop 65 Development Toxic, U.S. TRI Development Toxic, CA Prop 65 Female Reproductive Toxin, CA 65 Male Reproductive Toxin, U.S. TRI Reproductive Toxin.
ENDOCRINE DISRUPTION:	Not listed by Illinois EPA list, Keith list, Colborn list, Benbrook list, EU list.

ECOLOGICAL INFORMATION

BIODEGRADATION:	> 60% in 28 days (OECD 301D)
BIOLOGICAL EFFECTS:	Green algae Toxic Average Species LC_{50} = 50 µg/L
AQUATIC TOXICITY:	Not expected to show any detectable aquatic toxicity even in saturated solutions because of its extremely low water solubility. Fathead minnow, Average Species LC_{50} = 500,000 µg/L Silver salmon, Average Species LC_{50} = 10,000 µg/L

TRANSPORT INFORMATION

Not classified as hazardous or dangerous good in U.S. DOT, IMDG, ICAO/IATA.

IMO Technical Name, Cat. & Ship Type: Alcohols (C14-C18), Cat. Y, Ship Type 2.

REGULATORY INFORMATION

LABELING ACCORDING TO EC DIRECTIVES:
Not Applicable

LABELING ACCORDING TO GHS:
Not Applicable

US REGULATORY STATUS:

U.S. EPA Registered:	No	
TSCA Inventory Listing:	1-Hexadecanol	CAS# 36653-82-4
	1-Tetradecanol	CAS# 112-72-1
	1-Octadecanol	CAS# 112-92-5
SARA 311/312 Classification	Non hazardous	
CERCLA Section 102a/103 (40 CFR 302.4)	Not Listed	
SARA Title III Section 302 (40 CFR 355.30)	Not Listed	
SARA Title III Section 313 (40 CFR 372.65)	Not Listed	
OSHA Classification:	Non hazardous	

CANADA REGULATORY STATUS:

Workplace Hazardous Materials Information System (WHMIS)	This material is not a controlled product as defined by WHMIS Classification.
Canadian Domestic Substance List (DSL) Inventory Listing	Yes

MATERIAL SAFETY DATA SHEET
THE HALLSTAR COMPANY

Section 1 - Identification of Substance and Company

Product Name: **HALLSTAR® GMS Pure** **Product Code:** H001
Chemical Name: Glyceryl Monostearate

Supplier: The HallStar Company [1]
120 S. Riverside Plaza Suite 1620 PH: (877) 427-4255
Chicago, Illinois 60606
USA

HMIS
Health: 0
Flammability: 1
Reactivity: 0
Gloves, Safety Glasses & Dust Mask

Emergency Phone Numbers: The HallStar Company (708) 594 - 5999
CHEMTREC (transportation) (800) 424 - 9300

Section 2 - Information on Ingredients

Chemical Name	CAS #	%
Glyceryl Monostearate	123-94-4	40-45
Glyceryl Distearate	1323-83-7	49-57
Glycerin	56-81-5	3-6

Section 3 - Hazard Identification

Appearance/Odor: White Flake, mild odor.
Potential Health Effects
Skin Contact: Not expected to be a primary skin irritant. Prolonged or excessive skin contact may cause mild skin irritation.
Eye Contact: May cause slight eye irritation.
Ingestion: Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea and diarrhea.
Inhalation: Inhalation of vapors may be irritating to the respiratory system.

Section 4 - First Aid Measures

Skin Contact: Wash affected skin with soap and water. Seek medical attention.
Eye Contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists, consult a physician.
Ingestion: Rinse mouth thoroughly and seek medical attention.
Inhalation: Person should be moved to a fresh air environment.

Section 5 - Explosion and Fire-Fighting Measures

Extinguishing Media:	CO_2, Dry Chemical, Water Fog, Foam
Special Fire-Fighting Procedures:	A MSHA/NIOSH approved self contained breathing apparatus should be worn. Use water spray to cool fire-exposed containers.
Unusual Fire and Explosion Hazards:	Unknown

Section 6 - Accidental Release/Spill Procedures

Steps to be Taken in Case Material is Released or Spilled: Contain the spill and transfer material to separate containers for recovery or disposal. Wash floor area with hot water solution. Remove contaminated clothing and wash before reuse. Wash affected skin areas with soap and water. Keep spills out of all sewers and bodies of water.

Section 7 - Handling and Storage

Containers should be kept tightly closed and stored in a dry well-ventilated place. Do not handle or stroe near an open flame, heat or other sources of ignition.

Section 8 - Personal Protection

Hand Protection:	Impervious gloves
Eye Protection:	Safety glasses with side shields
Respiratory Protection:	None required for normal operation.
Engineering Measures:	A dust mask should be worn. Direct exhaust when material becomes heated and fumes are given off or dusting becomes a nuisance.
Other:	Eyewash facility in vicinity.

Section 9 - Physical and Chemical Properties

Boiling Point:	N/A	**Specific Gravity**:	0.97 @25° C
Flash Point (COC):	410° F	**pH (5% solution)**:	Not known
Melting or Freezing Point:	56-60° C	**Solubility in Water**:	Dispersible
Appearance and Odor:	White flake, mild odor.		

Section 10 - Stability and Reactivity

Stability:	This product is stable under normal conditions.
Conditions to Avoid:	Strong oxidizing agents and alkalies.
Hazardous Decomposition Products:	None under normal use conditions; oxides of carbon when burned.
Hazardous Polymerization:	Will not occur under normal circumstances.

Section 11 - Toxicological Information

No information found for this material; however, information below is for a closely related product:
Oral LD_{50} (rat): >5000 mg/kg
Eye irritation (rabbit): mild irritant, which cleared by day 3, post dose (primary irritation index = 10)
Skin irritation (rabbit) : essentially non-irritating (primary irritation index = 0.5), which cleared by 24 hrs., post dose.

Section 12 - Ecological Information

No ecological information is available at this time.

Section 13 - Disposal Considerations

Waste Disposal Methods: Material should be disposed of in accordance to current local and national regulations. Contacting a waste disposal service is recommended.

Section 14 - Transport Information

Not classified as hazardous according to the Department of Transportation.

Section 15 - Regulatory Information

Toxic Substances Control Act (TSCA): This product is in compliance with the TSCA regulation of the United States.

Superfund Amendments and Reauthorization Act (SARA): This product has the following hazards as defined in Section 311/312 of 40 CFR part 372:

Hazards
Acute

This product contains the following chemicals subject to the reporting requirements of Section 313 or Title III of SARA and 40 CFR Part 372:

Ingredients
None

California Proposition 65: This product does not contain any substances known to the state of California to cause cancer, birth defects, or other reproductive harm per the Safe Drinking Water and Toxic Enforcement Act of 1986.

Section 16 - Other Information

Prepared By: AAC

Revision Date: 06/07
Supersedes: New

All information is presented in good faith using available information. The HallStar Company makes no representation of the accuracy or completeness of the information. The user should consider this information as a supplement to other information that may be available. User should also determine suitability of information in their situation to determine proper use and disposal, protection of persons and the environment.

(1) Affiliated companies include RTD*HallStar Company, HallStar Solutions Corp., Ester Solutions Company, Memphis Solutions Company and Marine Magnesium & Minerals Company.

CBPULTREZ10-1K

Lubrizol

Material Safety Data Sheet
CARBOPOL® ULTREZ 10 POLYMER

Prepared according to 29CFR 1910.1200.

1 Chemical Product and Company Identification

THE LUBRIZOL CORPORATION
C/O KUEHNE & NAGEL
7701 TRADE PORT DRIVE
LOUISVILLE, KY 40258

Product Trade Name	CARBOPOL® ULTREZ 10 POLYMER
CAS Number	Confidential.
Synonyms	Carbomer
Generic Chemical Name	Polyacrylic acid
Product Type	Base Carbopol-Personal Care
Preparation/Revision Date	14 August 2009
Transportation Emergency Phone No.	FOR TRANSPORT EMERGENCY call CHEMTREC: (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)
MSDS No.	98854605-1213738-0020960-102103

2 Hazards Identification

Appearance	White powder.
Odor	Slight acidic
Principal Hazards	Caution.

- Airborne dust may form explosive mixtures with air.
- Dusts may be harmful if inhaled.
- May cause eye irritation.

See Section 11 for complete health hazard information.

3 Composition/Information on Ingredients

Hazardous Ingredients

Comp	CAS No.	Percentage (by wt.)	Carcinogen
Fatty acid ester	Confidential.	From 1 to 4.9 percent	N/E

(N/E) - None established

4 First Aid Measures

Eyes

Immediately flush eyes with plenty of one percent (1%) physiological saline solution for five

Maximum Storage Temperature	Not determined.
Storage Procedures	Store in a cool, dry, well-ventilated area. Keep container closed when not in use.
Loading Temperature	Not determined.

8 Exposure Controls/Personal Protection

Exposure Limits	None established
Other Exposure Limits	The industry-recommended permissible exposure limit for respirable polyacrylate dusts is 0.05 mg/m3
Engineering Controls	If use generates a dust, local exhaust ventilation is recommended. Prevent inhalation by providing effective general and, when necessary, local exhaust ventilation to draw dust away from workers. Avoid high concentrations of dust in air and accumulation of dust on equipment.
Gloves Procedures	Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur wear chemically protective gloves.
Eye Protection	Safety glasses or goggles.
Respiratory Protection	Use NIOSH/MSHA approved respirator with a High Efficiency Particulate Air (HEPA) filter if the recommended exposure limit is exceeded. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.
Clothing Recommendation	Long sleeve shirt is recommended.

9 Physical and Chemical Properties

Flash Point	Not applicable.
Upper Flammable Limit	Not determined.
Lower Flammable Limit	Not determined.
Autoignition Point	Not determined.
Explosion Data	Dust can form explosive mixtures in the air.
Vapor Pressure	Not determined.
pH	~ 2.5 - 3 at 1% in water
Specific Gravity	1.4 (20 °C)
Bulk Density	Not determined.
Water Solubility	Material will swell in water.
Percent Solid	Not determined.
Percent Volatile	Not determined.
Volatile Organic Compound	Not determined.
Vapor Density	Not determined.
Evaporation Rate	Not determined.
Odor	Slight acidic
Appearance	White powder.
Viscosity	Not determined.
Odor Threshold	Not determined.
Boiling Point	Not determined.
Pour Point Temperature	Not determined.
Melting / Freezing Point	Not determined.

may cause reproductive toxicity.

Teratogenicity No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.

-- ADDITIONAL INFORMATION --

Other Pre-existing skin conditions may be aggravated by prolonged or repeated exposure. Persons with sensitive airways (e.g., asthmatics) may react to vapors. This material readily absorbs moisture and may become thick and gelatinous upon contact with mucous membranes of the eye, or upon inhalation into the nasal passages.

12 Ecological Information

-- ENVIRONMENTAL TOXICITY --

Freshwater Fish Toxicity	Not determined.
Freshwater Invertebrates Toxicity	Not determined.
Algal Inhibition	Not determined.
Saltwater Fish Toxicity	Not determined.
Saltwater Invertebrates Toxicity	Not determined.
Bacteria Toxicity	Not determined.
Miscellaneous Toxicity	Not determined.

-- ENVIRONMENTAL FATE --

Biodegradation	At least 25% of the components in this product show limited biodegradation based on OECD 301-type test data. At least 25% of the components in this product show limited biodegradation based on OECD 302-type test data.
Bioaccumulation	Less than 1.0% of the components potentially bioconcentrate, based on octanol/water coefficients.
Soil Mobility	Not determined.

13 Disposal Considerations

Waste Disposal This material, if discarded, is not a hazardous waste under RCRA Regulation 40 CFR 261. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

14 Transport Information

ICAO/IATA I	Not regulated.
ICAO/IATA II	Not regulated.
IMDG	Not regulated.
IMDG EMS Fire	Not applicable.
IMDG EMS Spill	Not applicable.
IMDG MFAG	Not applicable.
MARPOL Annex II	Not determined.
USCG Compatibility	Not determined.
U.S. DOT Bulk	Not regulated.

-- Product Registrations --

U.S. Fuel Registration	Not applicable.
U.S. Dept of Agriculture	This product has not been filed with the USDA to support H2 approvals.
NSF Nonfood Compounds Registration	This product has not been filed with the NSF to support H1 or H2 approvals.
Finnish Registration Number	Not Registered
Swedish Registration Number	Not Registered
Norwegian Registration Number	Not Registered
Danish Registration Number	Not Registered
Swiss Registration Number	Not Registered
Italian Registration Number	Not Registered
Korean Registration Number	This product is registered in Korea with the Ministry of the Environment.

-- Other / International --

TDG Regulated Limit. None known.

16 Other Information

US NFPA Codes

Health	Fire	Reactivity	Special
1	1	0	N/E

(N/E) - None established

HMIS Codes

Health	Fire	Reactivity
1	1	0

Precautionary Labels

Caution.

- Airborne dust may form explosive mixtures with air.
- Dusts may be harmful if inhaled.
- May cause eye irritation.

Revision Indicators

Section: 6 Spill procedures.	Changed: 19 May 2009
Section: 7 Handling procedures.	Changed: 19 May 2009
Section: 11 Oral toxicity.	Changed: 19 May 2009
Section: 12 Algae toxicity.	Changed: 19 May 2009

SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Name: Triethanolamine 99

Product Code: 87730

Product Use: Chemical raw material

Manufacturer: INEOS Oxide
Block 5501
21255 A Louisiana Hwy. 1 South
Plaquemine, LA
70764
www.ineosoxide.com

Phone Number: (866) 865-4767

24-hour Emergency: CHEMTREC: (800) 424-9300

* Indicates a Trademark of INEOS Oxide.

Section 2: Hazards Identification

European Classification:
Regulation (EC) No 1272/2008

Eye Irritant, Cat. 2
Skin Irritant, Cat. 2

Hazard statements: Warning.
Causes serious eye irritation. Causes skin irritation.

Pictograms:

Precautionary statements: Wash hands thoroughly after handling. Wear protective gloves / protective clothing / eye protection / face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

European Union (EU): This preparation is classified as dangerous according to Directive 1999/45/EC. Classification: Irritant.
Irritating to eyes and skin.

U.S.A.: USA: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Canada: This is a controlled product under WHMIS. Classification D2B

Section 3: Composition / Information on Ingredients

Hazardous Ingredients:

Chemical Name	Common name	CAS No.	EINECS	Wt.%	Symbol	R Phrases
2,2',2"-nitrilotriethanol (Triethanolamine)	TEA	102-71-6	203-049-8	99-100	None	None
2,2'-iminodiethanol (Diethanolamine)	DEA	111-42-2	203-868-0	0.1-0.5	Xn; Xi	R22-48/22; R38-41

Note: See Section 16 for the full text of the R-phrases above.

SAFETY DATA SHEET

Section 4: First Aid Measures

Inhalation:

Symptoms of exposure may include coughing, wheezing, sore throat, difficult breathing.
If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical advice.

Eye Contact:

Direct contact with liquid or vapor will cause eye irritation.
Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for several minutes, while holding the eyelid(s) open. Neutral saline solution may be used as soon as it is available. Take care not to rinse contaminated water into the unaffected eye or onto face. If irritation persists, obtain medical attention.

Skin Contact:

Direct contact with the liquid may cause severe irritation with local discomfort or pain, redness and swelling.
As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash with plenty of soap and water. Discard contaminated clothing, shoes and leather goods. If irritation persists, obtain medical advice.

Ingestion:

Swallowing can cause irritation of the digestive tract with abdominal and chest pain, nausea, vomiting and diarrhea.
Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. **DO NOT INDUCE VOMITING**. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.

Section 5: Fire Fighting Measures

Flammable Properties:

Product can burn if heated [Flash point = 177°C (350°F)].

Suitable extinguishing Media:

Water fog or fine spray, carbon dioxide, alcohol-resistant foam or dry chemical. Use water spray to cool fire-exposed containers.
Violent steam generation or eruption may occur upon application of direct water stream to hot product.

Unsuitable extinguishing Media:

High pressure water streams may scatter hot liquid.

Explosion Data:

Sensitivity to Mechanical Impact: Not applicable
Sensitivity to Static Discharge: Not applicable

Specific Hazards arising from the Chemical:

During a fire, the chemical components may vaporize; these components can be severely irritating to eyes and respiratory tract. Hazardous combustion products may include and are not limited to: nitrogen oxides, ammonia, hydrogen cyanides, nitriles, nitrosamines, carbon monoxide, and carbon dioxide.

Protective Equipment and precautions for firefighters:

Evacuate the area and fight fire from a safe distance or a protected location. Approach the fire from upwind to avoid hazardous vapors. Burning liquids may be extinguished by dilution with water. Water spray may be used to flush spills away from ignition sources.

Avoid all contact with this material during fire fighting operations. Wear chemical resistant clothing (chemical splash suit) and positive-pressure self-contained breathing apparatus.

Contain water run-off if possible.

NFPA Hazard rating:

SAFETY DATA SHEET

Section 6: Accidental Release Measures

Personal Precautions: Isolate the area; keep all unprotected people away from the spill area. Ventilate the area. Wear all proper personal protective equipment as indicated in Section 8. Prevent inhalation exposures, skin contact and possible eye contact. Ensure clean-up is conducted by trained personnel only. Do not touch or walk through the spilled material. Extinguish or remove all ignition sources. Spilled material may pose a slipping hazard.

Environmental Precautions: Prevent material from contaminating soil and from entering sewers or waterways.

Methods for Containment: Isolate the spill area. Stop the spill if it is safe to do so. Contain the spill with earth, sand or other suitable non-combustible absorbent. Keep materials which can burn away from spilled product. Do not absorb with sawdust, woodchips or other cellulose materials.

Methods for Clean-up: Clean up spills immediately. Scoop up spilled product and any contaminated absorbents into appropriate, labeled containers. Contaminated absorbent may pose the same hazards as the spilled product. Flush the area with water.

Section 7: Handling and Storage

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Ensure that engineering controls are operating and that protective equipment requirements are being followed. Avoid generating mists and vapors.

Inspect containers for leaks before handling. Prevent damage to containers. Keep containers closed when not in use. Assume that empty containers contain residues which are hazardous.

Do not use with incompatible materials, e.g. brass (see Section 10).

Discard all contaminated leather items such as watchbands, shoes and belts.

Never perform any welding, cutting, soldering, drilling or other hot work on an empty vessel, container or piping until all liquid and vapors have been cleared.

Storage: Store in a cool, dry, well-ventilated area away from sunlight, heat and ignition sources. Keep storage area away from work areas. Store away from incompatible materials (see Section 10). Do not store in containers made of aluminum, copper, brass or other copper alloys. Keep containers tightly closed.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Consult local authorities for acceptable exposure limits.

Chemical Name	ACGIH TLV (8-hr. TWA) (mg/m^3)	U.S. OSHA PEL (8-hr. TWA) (mg/m^3)	Germany-DFG (8-hr. MAK) (mg/m^3)	Ontario (Canada) TWAEV (mg/m^3)
Triethanolamine	5	Not established	5; 20 Ceiling	3.1 (0.5 ppm)
Diethanolamine Inhalable fraction and vapor	1, Skin	15 (3 ppm)	1	2

Exposure Controls

Engineering Controls: Facilities utilizing or storing this material should be equipped with general or local exhaust ventilation. Ventilation system should be made of corrosion-resistant material.

Personal Protection

Eye/Face Protection: Wear chemical safety goggles. If splashing is possible wear a face shield.

Skin Protection: Wear chemical protective gloves made of butyl rubber or Viton ™. Wear clean, body-covering coveralls. Where prolonged or frequently repeated contact could occur, wear impervious body-covering clothing and chemical protective boots.

SAFETY DATA SHEET

Section 8: Exposure Controls/Personal Protection, continued

Respiratory Protection: Respiratory protection should not be necessary unless the product is heated to release vapors or a mist is created. If airborne vapor or mist exposure is likely wear an approved full-face mask, self-contained breathing apparatus. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard or Canadian Standards Association (CSA) Standard Z94.4-02 must be followed whenever workplace conditions warrant a respirator's use.

Other Protective Equipment: Have a safety shower and eye-wash fountain readily available for emergency use.

General Hygiene Measures: Remove contaminated clothing promptly. Keep contaminated clothing in closed containers; discard or launder before rewearing. Do not eat, drink or smoke in work areas. Wash hands thoroughly and promptly after handling this material. Maintain good housekeeping. Inform laundry personnel of contaminant's hazards.

Section 9: Physical and Chemical Properties

Physical State:	Liquid	**Flash Point & method:**	177°C (350°F) PMCC; ASTM D93
Appearance, Color and Odor:	Colorless, viscous; slight ammonia-like, disagreeable odor.	**Autoignition Temperature:**	324°C (615°F) [DIN 51794]
Odor Threshold:	160 mg/L (TEA in water at 60°C)	**Flammability Limits in Air:**	Lower: 1.5% Upper: Not available
pH:	10.5 (10% aqueous solution)	**Vapor Pressure:**	<0.01 mmHg @ 20 °C
Relative density: **(water = 1)**	1.12 @ 20°C	**Vapor Density:** **(Air = 1)**	5.14
Partition coefficient: **(n-octanol/water)**	-2.53 K_{ow}	**Evaporation Rate:** **(n-Butyl Acetate = 1)**	<0.01
Solubility in water:	Complete	**Boiling Point:**	340°C (644°F)
Viscosity:	601 centipoises @ 25°C	**Freezing Point:**	21°C (70°F)
Decomposition Temperature:	Not available		

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal temperature and pressure.

Conditions to Avoid: Avoid high temperatures and contact with sources of ignition. Avoid exposing product to air, light and moisture. Avoid direct sunlight.

Incompatible Materials: Avoid contact with strong acids, strong oxidizing agents, halogenated hydrocarbons, nitrating agents, alkali metals, metal hydrides and aluminum.
Product may be corrosive to aluminum alloys at elevated temperatures, many 400 series stainless steel alloys, copper, zinc, and aluminum bronze.
In combination with water, the product may be corrosive to copper and copper alloys (e.g. brass), some aluminum alloys, zinc, zinc alloys, and galvanized surfaces.

SAFETY DATA SHEET

Section 10: Stability and Reactivity, continued

Hazardous Decomposition Products: Decomposition products may include nitrogen oxides, ammonia, irritating aldehydes and ketones. Hazardous decomposition products depend upon temperature, air supply and the presence of other materials.
Oxidation in air may form transient, organic peroxides or thermally unstable N-oxides such as hydroxylamines and carbamates form as well as nitrosamines, which are suspected cancer causing chemicals. Oxidation of triethanolamine and decomposition of products is accelerated by light, heat, and/or presence of metals or metal oxides.

Possibility of Hazardous Reactions: Heating above 60°C in aluminum can result in corrosion and generation of flammable hydrogen gas.
Contact with nitrosating agents, under acidic conditions such as nitrous acid, nitrite or nitrogen oxides, can form nitrosamines some of which are potent carcinogens.
Absorbs moisture and can react with carbon dioxide in the air to form salts. It is decomposed by light and slowly oxidized by air, turning yellow and then brown. This reaction is accelerated by heat and the presence of metals.
Alkanolamine substances are oxidized by air slowly with evolution of heat. This reaction may lead to spontaneous combustion if the substance is on an adsorbent or on a high surface area material (e.g. absorbent material or thermal insulation).

Section 11: Toxicological Information

Acute Health Effects:

Relevant Route(s) of Exposure: Inhalation, Ingestion, Skin contact, Eye contact.

Inhalation: At room temperature, exposures to vapors are minimal due to the physical properties. When heated, vapor concentrations may be generated that can cause adverse effects. Overexposure to airborne vapors or mists can cause irritation to the respiratory tract. Symptoms of exposure may include coughing, wheezing and shortness of breath.

Ingestion: Component substances have low oral toxicity, but swallowing large amounts can cause irritation of the digestive tract with abdominal and chest pain, nausea, vomiting and diarrhea.

Skin: Direct contact with the product may cause skin irritation. Prolonged skin contact may result in severe irritation and substances being absorbed through the skin.

Eye: Direct contact with the product may cause eye irritation. Airborne vapors or mists may cause eye irritation.

Chronic Health Effects: Repeated exposures by ingestion, inhalation and skin contact, to high concentrations may cause liver and kidney damage. Effects may be delayed.

Prolonged or repeated exposure can cause dry, red, irritated skin (dermatitis or eczema). Triethanolamine may cause skin sensitization, an allergic skin reaction, in some people.

Medical Conditions Aggravated by Exposure: Repeated skin contact may aggravate an existing dermatitis. Repeated inhalation may aggravate respiratory conditions, such as asthma and bronchitis.

Interactions With Other Chemicals: Amino alcohol ingredients in this product may react with nitrites, under acid conditions to form nitrosamines some of which are potent carcinogens.

Acute Toxicity Data

Chemical Name	LD_{50} Oral (mg/kg)	LD_{50} Dermal (mg/kg)	LC_{50} Inhalation (4 hrs.)
Triethanolamine	4 190 (rat)	>2 000 (rabbit)	Not available
Diethanolamine	680 (rat)	8 180 (rabbit)	Not available

SAFETY DATA SHEET

Section 11: Toxicological Information, continued

Chronic Toxicity Data

Carcinogenicity: None of the agencies listed below have classified the component substances as human carcinogens. IARC: (International Agency for Research on Cancer) lists Triethanolamine and Diethamonamine in Group 3 – The agent is not classifiable as to carcinogenicity in humans. ACGIH designates Triethanolamine and Diethanolamine as A3 – confirmed animal carcinogen with unknown relevance to humans.

Sensitization: Contact skin allergy has been reported in people occupationally exposed to Triethanolamine in the textile industry and in metalworking fluids and to people non-occupationally exposed to Triethanolamine in cosmetics and medicines. Negative results have been obtained in a large number of animal skin sensitization tests.

Neurological Effects: None reported

Genetic Effects: Evidence from animal studies, cultured mammalian cells, and bacterial studies does not indicate that Triethanolamine is a mutagen.

Reproductive Effects: Limited data from animal studies does not indicate that Triethanolamine is a reproductive toxin.

Developmental Effects: Limited data from animal studies does not indicate that Triethanolamine is a developmental toxin.

Target Organ Effects: In tests with animals, long-term ingestion and skin contact exposures to high doses caused damage to the liver and kidney.

Section 12: Ecological Information

Ecotoxicity:

Algae:
- 72 Hr EC_{50} *Desmodesmus subspicatus*: 216 mg/L
- 96 Hr EC_{50} *Desmodesmus subspicatus*: 169 mg/L

Freshwater fish:
- 96 Hr LC_{50} *Pimephales promelas*: 10600-13000 mg/L [flow-through]
- 96 Hr LC_{50} *Pimephales promelas*: >1000 mg/L [static]
- 96 Hr LC_{50} *Lepomis macrochirus*: 450-1000 mg/L [static]

24 Hr EC_{50} *Daphnia magna*: 1386 mg/L

Persistence/Degradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
Material is ultimately biodegradable. Reaches more than 70% mineralization in OECD tests for inherent biodegradability.
Theoretical oxygen demand (ThOD) is calculated to be 2.04 p/p.
Inhibitory concentration (IC50) in OECD "Activated Sludge, Respiratory Inhibition Test" (Guideline #209) is > 1000 mg/L.

Bioaccumulation/Accumulation: Bioconcentration Factor (BCF) = <3.9 method: OECD 305C
K_{ow} = -2.53

Mobility: Henry's Law Constant (H) is estimated to be 3.38E-19 atm m^3/mole at 25°C.
Potential for mobility in soil is very high (Koc between 0 and 50).
Log soil organic carbon partition coefficient (log Koc) is estimated to be 0.48.

Other: For detailed Ecological data, write to the address in Section 1 or call INEOS Oxide's Customer Information Center at (866) 865-4767.

SAFETY DATA SHEET

Section 13: Disposal Considerations

Waste Disposal Method: **DO NOT** discharge into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage. For unused, uncontaminated product, the preferred options include sending to a licensed, permitted recycler, reclaimer incinerator or other thermal destruction device.

USA: Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.
Dispose of in accordance with local, state and federal laws and regulations.

Canada: Dispose of in accordance with local, provincial and federal laws and regulations.

Europe: Waste must be disposed of in accordance with relevant EU Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Other: Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. INEOS Oxide HAS 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 SDS SECTION 2.

As a service to its customers, INEOS Oxide can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone INEOS Oxide's Customer Information Center at (866) 865-4767.

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR): **Reportable Quantity for Bulk Shipments:**
100 lbs (45.4 kg) for Diethanolamine
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIETHANOLAMINE), 9, UN3082, PG III.

Canada Transportation of Dangerous Goods (TDG): Not Regulated

ADR/RID: Not Regulated

IMDG: Not Regulated

Marine Pollutants: Not applicable

ICAO/IATA: Not Regulated

Other: For regulatory information regarding transportation, if required, consult product shipping papers, or your INEOS Oxide representative.

Section 15: Regulatory Information

USA

TSCA Status: All component substances are listed in the TSCA inventory

SARA Title III
Sec. 302/304: None of the chemicals in this product have a TPQ.
Sec: 311/312: Acute
Sec. 313: Contains Diethanolamine, subject to Section 313 of SARA Title III and 40 CFR Part 372.
CERCLA RQ: Diethanolamine RQ 100 lb (45.4 kg)

Clean Air Act Triethanolamine – SOCMI Group 1
Diethanolamine, Hazardous Air Pollutant.

SAFETY DATA SHEET

Section 15: Regulatory Information, continued

Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: D2B – Material Causing Other Toxic Effects – due to eye and skin irritation.

NSNR Status: All component substances are listed on Canada's Domestic Substances List (DSL).

NPRI Substances: Diethanolamine is subject to the requirements of the National Pollutant Release Inventory. Part 1, Group 1 substance.

EU Classification

Classification of the preparation according to Directive 1999/45/EC.

Irritant
Irritating to eyes and skin.

Safety Phrases: S24/25: Avoid contact with skin and eyes.

European Union Inventory: Component substances are listed in EINECS.
EU - REACH - List of Preregistered Substances, November 30, 2010

Other National Inventories

Australia: All substances are present on the Inventory of Chemical Substances (AICS).

China: All substances are present on the Chinese inventory.

Japan: All substances are present on ENCS; Triethanolamine (2)-308.

Korea: All substances are present on the Inventory of Existing and Evaluated Chemical Substances; Triethanolamine KE-25940

New Zealand: All substances are present on the Inventory.

Philippines: All substances are present on the Inventory of Chemicals and Chemical Substances (PICCS).

Section 16: Other Information

Revision date: March 3, 2010

Revision summary: October 1, 2006: Section 1; updated Manufacturer address. Section 4; updated first aid information, Section 6; updated spill information, Section 11; updated acute toxicity data. Changed WHMIS classification, Section 14; revision to DOT reporting due to change in special provisions.
March 3, 2010: Update SDS template. Revised Section 8: Exposure Limits.

Manufacturer Disclaimer: The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Prepared by: LEHDER Environmental Services Limited (519) 336-4101
www.lehder.com
While LEHDER Environmental Services Limited believes that the data set forth herein is accurate, as of the date hereof, LEHDER makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration, investigation and verification.

Full Text of R-phrases appearing in Section 3:
R22: Harmful if swallowed.
R38: Irritating to skin.
R41: Risk of serious damage to eyes.
R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Text of classifications appearing in Section 3:
Xi - Irritant
Xn - Harmful

Material Safety Data Sheet

20002D

Revision Date: 12/18/2002
Issued: 12/18/2002

GERMABEN® II

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By: Sutton Laboratories
116 Summit Ave.
Chatham, NJ 07928

Emergency Telephone: CHEMTREC: 1-800-424-9300 (Spill Related Emergencies)
PROSAR: 1-800-241-7439 (Health Related Emergencies)

Prepared By: Product Stewardship

Product Id: 20002D

Product Name: GERMABEN® II

CAS Registry Number: 57-55-6; 78491-02-8; 99-76-3; 94-13-3

CAS Registry Name: 1,2-Propanediol; Urea, N-(1,3-bis(hydroxymethyl)-2,5-dioxo-4-imidazolidinyl)-N,N'-bis(hydroxymethyl)-; Benzoic acid, 4-hydroxy-, 1-methyl ester; Benzoic acid, 4-hydroxy-, propyl ester

Synonyms: Propylene Glycol; Diazolidinyl Urea; Methylparaben; Propylparaben (INCI NAMES)

Product Use: Preservative

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Components:	Weight %	ACGIH Threshold Limit Values Data - Time Weighted Average (TWA):	OSHA Specifically Regulated Substances Data - Time Weighted Average (TWA):
1,2-Propanediol 57-55-6	56	No TLV/TWA Established	No TLV/TWA Established
Urea, N-(1,3-bis(hydroxymethyl)-2,5-dioxo-4-imidazolidinyl)-N,N´-bis(hydroxymethyl) 78491-02-8	30	No TLV/TWA Established	No TLV/TWA Established

Statement of Hazardous Nature: Causes mild eye irritation. (Propylene Glycol & Diazolidinyl urea) Causes mild skin irritation. (Propylene Glycol)

3. HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! CAUSES MILD EYE IRRITATION. CAUSES MILD SKIN IRRITATION.

Hazard Overview

Target Organs: Skin / Eyes

Primary Entry Routes: Dermal - skin. Eyes.

Acute Health Hazards: Causes mild eye irritation. Causes mild skin irritation.

Chronic Health Hazards: None known

Signs and Symptoms of Overexposure

Eye Contact:	Causes mild eye irritation .
Skin Contact:	Causes mild skin irritation.
Ingestion:	Not a hazard under normal use conditions.
Inhalation:	Not a hazard under normal use conditions.

4. FIRST AID MEASURES

Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin Contact:	Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if symptoms occur.
Ingestion:	Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation:	No specific treatment is necessary since material is not likely to be hazardous by inhalation. If exposed to excessive levels of dust or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

5. FIRE FIGHTING MEASURES

NFPA Rating:	Health: 1 Flammability: 1 Reactivity: 0
Flash Point (°F):	199.4
Extinguishing Media:	All standard firefighting media
Unusual Fire/Explosion Hazards:	Unknown
Special Protective Equipment:	Fire fighters should wear full protective clothing, including self-contained breathing equipment.

HMIS RATING:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures:	Use appropriate protective equipment.
Procedure for Cleaning/Absorption:	Contain spill with sand or other inert materials.

7. HANDLING AND STORAGE

Handling:	Avoid contact with skin and eyes. Wash thoroughly with soap and water after handling. May produce sensitization to damaged exposed skin (as sold) (See Toxicological Section 11). Wear appropriate PPE.
Storage:	Storage at temperatures below 10°C requires thawing and mixing prior to use, with no detrimental effect to product quality or efficacy. Keep containers tightly closed when not in use. Store in a cool, dry place, out of direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	Use in a well ventilated area.
Respiratory Protection:	Use in a well ventilated area.
Hand Protection:	All cleanable impervious glove types are acceptable.

Eye Protection: Safety glasses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Clear to pale yellow

Odor: CHARACTERISTIC, MILD

Odor Threshold: Not available

pH: Not determined

Specific Gravity: 1.18

Boiling Point (°F): 369

Melting Point (°F): Not determined

Vapor Pressure: 0.22 mm Hg @ 20°C

Solubility: 1.5g/100g @25°C

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of handling, use and transportation.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None anticipated

11. TOXICOLOGICAL INFORMATION

Toxicity Test:

Acute Oral LD50 (mg/kg): 20,000 (Propylene Glycol)
2,570 (Diazolidinyl Urea)
>5,600 (Methylparaben)
6,332 (Propylparaben)

Acute Dermal LD50 (mg/kg): >2,000 (Diazolidinyl urea) (rabbit)
31,000 (Propylene Glycol (rabbit)

Acute Inhalation LC50 (mg/l): 1.3 mg/kg (rat) (Diazolidinyl urea, 50% Aqueous solution)

Sensitization: Non-sensitizing (0.5% aqueous solution) (Human RIPT) (Diazolidinyl urea)
Non-sensitizing to guinea pigs (0.1% aqueous solution) (Diazolidinyl urea)
Slight sensitizer to guinea skin in Guinea Pig Maximization Test (5% aqueous solution injection) (Diazolidinyl urea)

Mutagenicity: Non-mutagenic (Propylene Glycol)
Non-mutagenic (Ames assay). (Diazolidinyl urea)
Non-mutagenic (Ames assay & Dominant lethal assay) (Methylparaben).
Nonmutagenic Ames assay with and without metabolic activation. (Propylparaben)

Teratogenicity: Non-teratogenic (Propylene Glycol)
Non-teratogenic in rats dosed orally with 125, 250 or 500 mg/kg day.
Nonteratogenic in rats receiving dermally 30-300 mg/kg/day from days 6-15 of gestation. (Diazolidinyl urea)
Non-teratogenic in rabbits dosed orally with 3-300 mg/kg. Non-teratogenic in rats and mice receiving 5-500 mg/kg gestation days 6-18. (Methylparaben)

Skin Irritation:

Mildly irritating to rabbit skin at 100%. (Methylparaben)
Minimally irritating to rabbit skin (0.3% in product formulation). (Propylparaben)
Mildly irritating to human skin (Propylene glycol).
Non-irritating to human skin (0.5% aqueous solution, Diazolidinyl urea)
Non-irritating to rabbit (5% aqueous solution) and guinea pig skin (100% wettable powder) (Diazolidinyl urea)

Eye Irritation:

Mildly irritating to rabbit eye (Propylene glycol)
Mildly irritating to rabbit eye (50% aqueous solution) (Diazolidinyl urea)
Non-irritating to rabbit eye (1 & 5 % aqueous solutions) (Diazolidinyl urea)
Practically non-irritating to rabbit eye (100% Methylparaben)
Minimally irritating to rabbit eye. (up to 8% in formulations) (Propylparaben)

Other Information:

Phototoxicity: Non-phototoxic (0.5% Diazolidinyl urea)
Phototoxicity: Non-phototoxic (Propylparaben)
Phototoxicity: Non-phototoxic. (Methylparaben)
Subchronic Oral Toxicity: Rats fed diets containing 0-50,000 ppm of Propylene Glycol for 15 weeks. The Propylene Glycol in the feed corresponded to a dose of 2.5g/kg/day. No significant differences were found between the control & Propylene Glycol dosed animals.
Subchronic Oral Toxicity: Rat 90; 10, 25, 100 mg/kg/day - no observed adverse effect level (NOAEL) 100 mg/kg/day (Diazolidinyl urea)
28day; 100, 300, 900 mg/kg. no observed adverse effect level (NOAEL) 100 mg/kg/day (Diazolidinyl urea)
Photosensitization: Non-sensitizing to guinea pig skin. (0.5% Diazolidinyl urea)

12. ECOLOGICAL INFORMATION

Biodegradability:

Not determined.

Aquatic Toxicity:

Daphnia Magna, 48 hr. EC50: 34.9 mg/L; NOEL 21.6 mg/L
Bluegills, 96 hr. LC50: >100 mg/L; NOEL 60mg/L
Rainbow trout, 96 hr. LC50: >100 mg/L; NOEL 100 mg/L
Acute Oral LD50: >2,250 mg/kg (Northern bobwhite).
5-Day subacute dietary studies produced no evidence of toxicity at concentrations up to 5,620 ppm. (Diazolidinyl urea)

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method:

Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected.

14. TRANSPORT INFORMATION

Land Transportation:

DOT (Non-Bulk):

DOT Shipping Name: NOT REGULATED

UN/NA Number: NONE

Hazard Class: NONE

DOT (Bulk):

DOT Shipping Name: NOT REGULATED

UN/NA Number: NONE

Hazard Class: NONE

Air Transportation (IATA):

Proper Shipping Name:	NOT REGULATED
UN Number:	NONE
Hazard Classification:	NONE

Sea Transportation (IMO):

Proper Shipping Name:	NOT REGULATED
UN/ID Number:	NONE
Hazard Classification:	NONE

TDG (Canada):

Proper Shipping Name:	NOT REGULATED
Hazard Class:	NONE

15. REGULATORY INFORMATION

TSCA Inventory List -	This product and/or its components is listed on TSCA.
California Proposition 65 Carcinogens & Reproductive Toxicity (CRT) List -	None of the components of this product is listed on CALPROP.
WHMIS Ingredient Disclosure List -	None of the components of this product is listed on WHMIS Ingredient Disclosure list
Canada DSL Inventory List -	This product and/or its components is listed on DSL.
Canada NDSL Inventory List -	This product and/or its components is not listed on NDSL.
Japan Inventory of Existing & New Chemical Substances (ENCS) -	This product and/or its components is not listed on ENCS.
Australia Inventory of Chemical Substances (AICS) List -	This product and/or its components is listed on AICS.
EU EINECS List -	This product and/or its components is listed on EINECS.
EU ELINCS List -	This product and/or its components is not listed on ELINCS.

16. OTHER INFORMATION

Prepared By:	Product Stewardship
Legend:	N.Av.= Not Available; N.Ap.= Not Applicable
Important Note:	ISP TECHNOLOGIES INC. (ISP) manufacturers industrial products for use as materials in the production of products by industrial customers. The information herein is intended for use by persons who have or should obtain professional knowledge and experience in the subjects discussed. ISP usually has only limited information about the products of its customers and their composition, methods of manufacture and use. Accordingly, ISP MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS OR RELIABILITY OF INFORMATION HEREIN EXCEPT THAT SUCH INFORMATION IS, THE BEST OF ISP'S KNOWLEDGE AND BELIEF, ACCURATE AS OF THE DATE INDICATED. ISP recommends that customers independently test and evaluate its products and their products and processes in which ISP products are used in order to decide their safety and effectiveness.

*****END OF MSDS*****

Material Safety Data Sheet

ACME
HARDESTY
450 Sentry Parkway
Blue Bell, PA 19422
www.acme-hardesty.com
Tel: (215) 591-3620
Fax: (215) 591-3620

PRODUCT NAME: TRIPLE PRESSED STEARIC ACID VEG

CHEMICAL PRODUCT AND DISTRIBUTOR IDENTIFICATION

TRADE NAME:	TRIPLE PRESSED STEARIC ACID VEG
CAS #:	57-11-4
EINECS#;	200-313-4
DATE:	December 19, 2007
DISTRIBUTOR:	ACME-HARDESTY COMPANY
ADDRESS:	450 Sentry Parkway Blue Bell, PA 19422
TELEPHONE:	(866) 226-3834
FAX:	(215) 591 – 3620
EMERGENCY:	CHEMTREC (800) 424-9300

COMPOSITION / INFORMATION ON INGREDIENTS

COMPOSITION	CHEMICAL FORMULA	CAS#	PROPORTION	EC#	EC SYMBOL/R-PHRASE
Hexadecanoic Acid +	$C_{16}H_{32}O_2/CH_3(CH_3)_{14}COOH$	67701-03-5	27 – 66	266-928-5	Not Applicable
Octadecanoic Acid	$C_{18}H_{36}O_2/CH_3(CH_2)_{16}COOH$		32 – 72		

SYNONYM: Palmitic Acid 55%

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Special hazards for man and environment: None

PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE:	Waxy, white crystalline solid
ODOR:	Slight bland-like odor
SOLUBILITY:	Soluble in ethanol, ether and most organic solvents Insoluble in water (20°C)
BOILING POINT, °C:	>300
MELTING POINT, °C	55 – 60
VAPOR PRESSURE (mm of Hg @ 131°C):	<1.0
% VOLATILES:	Not known
EVAPORATION RATE:	Not known
VAPOUR DENSITY:	Not known
DENSITY, g/ml @ 75°C:	0.85
FLASH POINT, °C (Pensky-Kartens Closed Cup):	>200°C
AUTO-IGNITION TEMPERATURE, °C:	>250°C
VISCOSITY, mPa.s @ 65°C:	8.04
MOLAR MASS:	256.4 – 284.5

FIRST AID MEASURES

NGESTION: Rinse mouth, drink plenty of water, see physician.
Do not give anything by mouth to an unconscious person.

YE CONTACT: Flush with water, take to a doctor if necessary.

KIN CONTACT: Remove contaminated clothing, flush skin with water or shower, take to a doctor if necessary.

NHALATION: Not relevant.

FIRE FIGHTING MEASURES

XTINGUISHING MEDIA: Dry powder, carbon dioxide or foam, water spray jet

PECIAL HAZARD: Liquid product may have temperature exceeding 50°C

ACCIDENTAL RELEASE MEASURE

ERSONAL PRECAUTIONS: Avoid contact with skin and eyes.

NVIRONMENT PRECAUTIONS: Do not allow to flow into drainage system.

LEAN-UP METHODS: Collect leakage in sealable containers.
Soak up with sand or other inert absorbent and remove to safe place.
Wash site with sodium bicarbonate solution or soda ash.
Spillage may be allowed to solidify; then shovel into containers.
Clean up area immediately.

HANDLING AND STORAGE

ANDLING: Avoid open flames.
Use gloves and wear goggle when handling.
Always work safely around open hatches on bulk tanks.
The low density makes floatation difficult for immersed person.

TORAGE: Keep in a cool and dry place, avoid extreme heat and cold.
Store in a clean, dry, preferably stainless steel vessel.
In bulk, store at about 5-10°C above melting point or at ambient temperature.
Temperature higher than necessary degrades quality at rates dependent on time and temperature of exposure.

EXPOSURE CONTROL / PERSONAL PROTECTION

XPOSURE LIMIT: Not applicable

NDUSTRIAL HYGIENE: Normal standard of industrial hygiene to be observed

ERSONAL PROTECTIVE EQUIPMENT:
HAND/SKIN PROTECTION: Use rubber gloves
EYE PROTECTION: Wear approved safety goggles and face shield

STABILITY AND REACTIVITY

ONDITIONS TO AVOID: Avoid direct fire.

ATERIALS TO BE AVOIDED: None known if used for its intended purpose.

ECOMPOSITION PRODUCTS: None known if used for its intended purpose.

DISPOSAL INFORMATION

Disposal method in accordance with all applicable notional environment laws and regulations

TOXICOLOGICAL INFORMATION

TOXICITY DATA:	LD 50 (oral, rat) = 10000 mg/kg
CARCINOGENICITY:	None
REPRODUCTIVE EFFECTS:	No harmful effects expected
EFFECT OF OVER-EXPOSURE:	No harmful effects expected
CHRONIC EFFECTS:	No harmful effects expected
TARGET ORGANS:	Not Applicable

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: No special requirements.

ECOLOGICAL INFORMATION

ECOTOXICITY: Acute fish toxicity: LC 50 > 100mg product/liter
Acute bacteria toxicity: EC 50 > 100mg product/liter

BIODEGRADABILITY: Biodegradable

TRANSPORT INFORMATION

Not a hazardous material according to RID/ADR, GGVS/GGVE, ADNR, IMDG, ICAO-TI / IATA-DGR

REGULATORY INFORMATION

Palm Kernel / Palm based blended fatty acids is classified under non-hazardous chemical

EUROPEAN INFORMATION: Based on toxicological studies I the published literature, there are no risk and safety phrases to assign this product.

All components of this product are listed on the following inventories:

- TSCA (Toxic Substances Control Act)
- DSL (Canada)
- EINECS/ELINCS (Europe)
- AICS (Australia)

OTHER INFORMATION

Always work safely around open hatches on bulk tanks. The low density makes flotation difficult for immersed person.

HMIS Information: Health: 1 Flammability: 1 Reactivity: 0

NFPA Information Health: 1 Flammability: 1 Reactivity: 0

" Not Listed on CA Prop 65"