



Precautionary Statements (GHS-US)

- : P234 - Keep only in original container.
- P260 - Do not breathe vapors, mist, or spray.
- P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, and eye protection.
- P301+P312 - IF SWALLOWED: Call a poison center or doctor if you feel unwell.
- P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do.
Continue rinsing.
- P310 - Immediately call a poison center or doctor.
- P314 - Get medical advice/attention if you feel unwell.
- P321 - Specific treatment (see section 4 on this SDS).
- P330 - Rinse mouth.
- P363 - Wash contaminated clothing before reuse.
- P390 - Absorb spillage to prevent material damage.
- P405 - Store locked up.
- P406 - Store in corrosive resistant container with a resistant inner liner.
- P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. This material or its emissions may defat skin, cause contact dermatitis, or aggravate existing skin disease. When mixing, always add acid to water, NEVER add water to acid. Adding water to acid may cause a violent exothermic reaction.

Unknown Acute Toxicity (GHS-US)

No data available

Section 3 · COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Name	Product Identifier	%	Classification (GHS-US)
Proprietary ingredient 1	(CAS No) Proprietary	Proprietary	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
Proprietary glycol	(CAS No) Proprietary	Proprietary	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Proprietary alcohol	(CAS No) Proprietary	Proprietary	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336



Proprietary acid	(CAS No) Proprietary	Proprietary	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Proprietary diethanolamide	(CAS No) Proprietary	Proprietary	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Aquatic Acute 2, H401
Proprietary organic amine	(CAS No) Proprietary	Proprietary	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 2, H351 STOT RE 2, H373 Aquatic Acute 2, H401 Aquatic Chronic 3, H412

Section 4 · **FIRST-AID MEASURES**

Inhalation	Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start CPR. Obtain medical attention.
Skin Contact	Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Continue rinsing. Obtain medical attention if irritation occurs.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart during irrigation to ensure thorough flushing of the entire area of the eye and lids. Remove contact lenses, if present and easy to do. Get medical attention immediately. Continue rinsing.
Ingestion	If victim is conscious, give 2 to 4 glasses of water. Do not induce vomiting. Obtain medical attention.
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

Section 5 · **FIRE-FIGHTING MEASURES**

Suitable extinguishing	Use extinguishing media appropriate for surrounding fire. Dry powder, alcohol-resistant foam, water in large amounts, carbon dioxide (CO2)
Unsuitable extinguishing	Do not use a heavy water stream. Use of heavy stream of water may spread fire.
Specific hazards arising from the chemical	<p><i>Fire Hazard:</i> Not considered flammable but may burn at high temperatures.</p> <p><i>Explosion Hazard:</i> Product is not explosive. Not explosive, but may release hydrogen gas on contact with some metals.</p> <p><i>Reactivity:</i> May react violently with oxidants, causing fire and explosion hazard. May react violently with alkalis.</p>



Special protective equipment and precautions for firefighters

Exercise caution when fighting any chemical fire.

Fire-fighting equipment/instructions

Use water spray or fog for cooling exposed containers. Do not get water inside containers. Do not apply water stream directly at source of leak. Do not breathe fumes from fires or vapors from decomposition. Do not allow run-off from firefighting to enter drains or water courses.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

Burning may result in formation of carbon dioxides.

Section 6 · ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use appropriate personal protection equipment (PPE). Evacuate unnecessary personnel.

Methods and materials for containment and cleaning up

Large Spills Clean up spills immediately and dispose of waste safely. Cautiously neutralize spilled liquid. Absorb spillage to prevent material damage. Do not take up in combustible material such as: saw dust or cellulosic material. If spilled directly onto the ground, remove sufficient soil to ensure material is fully recovered. Contact competent authorities after a spill.

Small Spills Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Environmental precautions

Prevent entry to sewers and public waters.

Section 7 · HANDLING & STORAGE

Precautions for safe handling

Additional Hazards When Processed: May be corrosive to metals.

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Avoid all eyes and skin contact and do not breathe vapor and mist. Use appropriate personal protection equipment (PPE).

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store in original container or corrosive resistant and/or lined container. Storage areas should be periodically checked for corrosion and integrity. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up. Incompatible Products: Strong acids. Strong bases. Strong oxidizers. Acetaldehyde. Chlorine. Ethylene oxide. Isocyanates. Alkalis. Metals.

Incompatible Materials: Heat sources.

Section 8 · EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Proprietary organic amine (Proprietary)

USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (inhalable fraction and vapor)
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	3 ppm

Proprietary glycol (Proprietary)

USA ACGIH	ACGIH Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen

Proprietary alcohol (Proprietary)

USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	400 ppm
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	980 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	1225 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	500 ppm
USA IDLH	US IDLH (ppm)	2000 ppm (10% LEL)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	980 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	400 ppm

Proprietary acid (Proprietary)

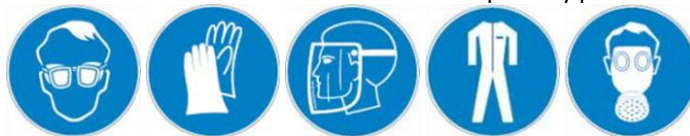
USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
USA ACGIH	ACGIH STEL (mg/m ³)	3 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	3 mg/m ³
USA IDLH	US IDLH (mg/m ³)	1000 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³

Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Protective goggles. Gloves. Face shield. Protective clothing.
Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Acid-resistant clothing.

Section 9 · PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, liquid.
Odor	N/A
Odor threshold	N/A
pH	0.85
Melting point/freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	N/A
Evaporation rate	N/A
Flammability (solid, gas)	N/A
Upper/lower flammability or explosive limits	
<i>Flammability limit - lower (%)</i>	N/A
<i>Flammability limit - upper (%)</i>	N/A
Explosive limit - lower (%)	N/A
Explosive limit - upper (%)	N/A
Vapor density	N/A
Relative density	8.92 lbs/gal
Specific gravity	N/A
Solubility(ies)	
<i>Solubility (water)</i>	N/A
Partition coefficient (n-octanol/water)	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A

Section 10 · STABILITY & REACTIVITY

Reactivity	May react violently with oxidants, causing fire and explosion hazard. May react violently with alkalis.
Chemical stability	Material is stable under normal conditions
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	Direct sunlight. Extremely high or low temperatures. Sources of ignition. Incompatible materials.
Incompatible materials	Strong acids. Strong bases. Strong oxidizers. Acetaldehyde. Chlorine. Ethylene oxide. Isocyanates. Alkalis. Metals.
Hazardous decomposition products	May release flammable gases. Carbon oxides (CO, CO ₂). Nitrogen oxides. Hydrocarbons. Carbonyl compounds. Phosphorus oxides. Phosphine.

Section 11 · TOXICOLOGICAL INFORMATION

Information On Toxicological Effects

Acute Toxicity: Oral: Harmful if swallowed.

Unifast B

ATE (Oral) 1,352.75 mg/kg body weight

Proprietary diethanolamide (Proprietary)

LD50 Oral Rat 12400 mg/kg

LD50 Dermal Rabbit > 2000 mg/kg

Proprietary organic amine (Proprietary)

LD50 Oral Rat 1820 mg/kg

Proprietary glycol (Proprietary)

LD50 Oral Rat 4700 mg/kg

LD50 Dermal Rat 10600 mg/kg

ATE (Oral) 500.00 mg/kg body weight

Proprietary alcohol (Proprietary)

LD50 Oral Rat 4710 mg/kg

LD50 Dermal Rabbit 4059 mg/kg

LC50 Inhalation Rat 72.6 mg/l/4h (Exposure time: 4 h)

ATE (Vapors) 72.50 mg/l/4h

Proprietary ingredient 1 (Proprietary)

LD50 Oral Rat 1310 mg/kg

Proprietary acid (Proprietary)

LD50 Oral Rat 1530 mg/kg

LD50 Dermal Rabbit 2740 mg/kg

LC50 Inhalation Rat > 850 mg/m³ (Exposure time: 1 h)

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: 0.85

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 0.85

Respiratory or Skin

Sensitization: Not classified

Germ Cell Mutagenicity:

Not classified

Carcinogenicity:

Not classified

Proprietary diethanolamide (Proprietary)

IARC group 2B

OSHA Hazard Communication Carcinogen List In OSHA Hazard Communication Carcinogen list.

Proprietary organic amine (Proprietary)

IARC group 2B

OSHA Hazard Communication Carcinogen List In OSHA Hazard Communication Carcinogen list.

Proprietary alcohol (Proprietary)

IARC group 3

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

Symptoms/Injuries After Skin Contact: Causes severe skin burns. Redness. Pain. Serious skin burns. Blisters.



Symptoms/Injuries After Eye Contact: Causes serious eye damage. Causes permanent damage to the cornea, iris, or conjunctiva. Can cause blindness.

Symptoms/Injuries After Ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: Causes damage to organs through prolonged or repeated exposure.

Section 12 · ECOLOGICAL INFORMATION

Toxicity

Ecology - General

: Harmful to aquatic life with long lasting effects.

Proprietary diethanolamide (Proprietary)

LC50 Fish 1

3.6 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])

EC50 Daphnia 1

2.15 mg/l (Exposure time: 48 h - Species: Daphnia pulex [Static])

ErC50 (algae)

2.2 mg/l (Exposure time: 72 h - Species: Scenedesmus subspicatus)

Proprietary organic amine (Proprietary)

LC50 Fish 1

4460 (4460 - 4980) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

EC50 Daphnia 1

55 mg/l (Exposure time: 48 h - Species: Daphnia magna)

LC 50 Fish 2

1200 (1200 - 1580) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

EC50 Other Aquatic Organisms 2

2.1 (2.1 - 2.3) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)

ErC50 (algae)

2.2 mg/l (Exposure time: 96 h - Species: Pseudokirchnerella)

NOEC chronic crustacea

0.78 mg/l

Proprietary glycol (Proprietary)

LC50 Fish 1

41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

EC50 Daphnia 1

46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)

LC 50 Fish 2

14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Proprietary alcohol (Proprietary)

LC50 Fish 1

9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

EC50 Daphnia 1

13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)

EC50 Other Aquatic Organisms 1

1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)

LC 50 Fish 2

11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

EC50 Other Aquatic Organisms 2

1000 mg/l (Exposure time: 72 h - Species: Desmodesmus)

Persistence and Degradability

Unifast B

Persistence and Degradability

Not established.

Bioaccumulative Potential

Unifast B

Bioaccumulative Potential

Not established.

Proprietary organic amine (Proprietary)

BCF fish 1

(no significant bioconcentration)

Log Pow

-2.18 (at 25 °C)

Proprietary glycol (Proprietary)

Log Pow

-1.93

Proprietary alcohol (Proprietary)

Log Pow 0.05 (at 25 °C)
Mobility in Soil No additional information available
Other Adverse Effects
Other Information : Avoid release to the environment.

Section 13 • DISPOSAL CONSIDERATION

Disposal instructions Consult federal, state and local regulations for disposal requirements.
Local disposal regulations Dispose in accordance with all applicable regulations.
Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 • TRANSPORT INFORMATION

General Not DOT regulated in domestic (USA ground) transportation in package sizes less than 3,550 lbs (317 gallons); 1,610 kg (1,200 liters). The DOT transportation information below is for shipments with package sizes equal to or exceeding this value. IMDG Regulated Marine Pollutant.

DOT - Basic shipping requirements:

UN number UN1760
DOT Label 8
Proper shipping name CORROSIVE LIQUIDS, N.O.S. (Phosphoric acid mixture)
Hazard class 8
Packing group II
ERG Number 154



IMGD - Basic shipping requirements:

UN number UN1760
IMGD Label 8
Proper shipping name CORROSIVE LIQUIDS, N.O.S. (Phosphoric acid mixture)
Hazard class 8
Packing group II
EMS NO F-A (Fire), S-B (Spillage)



IATA - Basic shipping requirements:

UN number UN1760
Proper shipping name CORROSIVE LIQUIDS, N.O.S. (Phosphoric acid mixture)
Hazard class 8
Packing group II
ERG Code 8L



Environmental hazards

Marine pollutant No

Special precautions Read safety instructions, SDS and emergency procedures before handling.

US State Regulations

Proprietary diethanolamide (Proprietary)



U.S. - California - Proposition 65 - Carcinogens List

WARNING: This product contains chemicals known to the State of California to cause cancer.

Proprietary organic amine (Proprietary)

U.S. - California - Proposition 65 - Carcinogens List

WARNING: This product contains chemicals known to the State of California to cause cancer.

Proprietary organic amine (Proprietary)

- U.S. - Massachusetts - Right To Know List
- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
- U.S. - Pennsylvania - RTK (Right to Know) List

Proprietary glycol (Proprietary)

- U.S. - Massachusetts - Right To Know List
- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
- U.S. - Pennsylvania - RTK (Right to Know) List

Proprietary alcohol (Proprietary)

- U.S. - Massachusetts - Right To Know List
- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
- U.S. - Pennsylvania - RTK (Right to Know) List

Proprietary acid (Proprietary)

- U.S. - Massachusetts - Right To Know List
- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
- U.S. - Pennsylvania - RTK (Right to Know) List

Section 15 • REGULATORY INFORMATION

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Proposition 65 (CA) Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated

CERCLA Hazardous Substance List (40 CFR 302.4)

Reportable Quantity Not applicable

SARA 304 Emergency release notification Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

<i>Hazard categories</i>	Immediate Hazard	Yes
	Delayed Hazard	Yes
	Fire Hazard	No
	Pressure Hazard	No
	Reactivity Hazard	No

SARA 302 Extremely hazardous substance Not listed

SARA 311/312 Hazardous chemical Immediate (acute) health hazard



Delayed (chronic) health hazard

Section 16 • OTHER INFORMATION

Issue date February 28, 2017

Disclaimer The above information is based on data of which the manufacturer is aware and is believed to be correct as of the date hereon. Since the information contained herein may be applied under conditions beyond the manufacturer's control and which may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, the manufacturer does not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

GHS Full Text Phrases:

Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Carc. 2	Carcinogenicity Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life



H410
H412

Very toxic to aquatic life with long lasting effects
Harmful to aquatic life with long lasting effects