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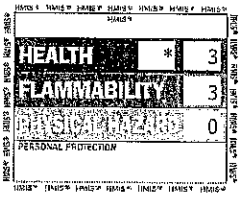
CLEARWATER
Engineered Chemistry

Material Safety Data Sheet

PROHIB II



1. Product and Company Identification

Material name	**PROHIB II**
Patent Number	Not available
Revision date	December-05-2008
Version No.	1
CAS #	Mixture
Manufacturer information	Clearwater International L.L.C. 100 Leetsdale Industrial Drive Leetsdale, PA 15056 US CHEMTREC 1-800-424-9300/703-527-3887
Emergency	CHEMTREC 1-800-424-9300/703-527-3887
Supplier information	Clearwater International L.L.C. 100 Leetsdale Industrial Drive Leetsdale, PA 15056 US
Supplier emergency telephone number(s)	CHEMTREC 1-800-424-9300/703-527-3887

2. Hazards Identification

Emergency overview	Will be easily ignited by heat, spark or flames. Prolonged exposure may cause chronic effects.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Skin contact. Eye contact. Ingestion. Inhalation.
Eyes	Risk of serious damage to eyes.
Skin	This product may be harmful if it is absorbed through the skin.
Inhalation	Prolonged inhalation may be harmful. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	May cause delayed lung damage. Do not ingest. Components of the product may be absorbed into the body by ingestion.
Target organs	Kidney. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged and may cause blood damage. These effects have not been observed in humans. Central nervous system. Eyes. Gastrointestinal tract. Liver. Lungs. Respiratory system. Skin.

Chronic effects	This product may be harmful if it is absorbed through the skin. Shortness of breath. Edema. Jaundice. Liver injury may occur. Kidney injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. May cause delayed lung damage.
Signs and symptoms	Discomfort in the chest. Shortness of breath. Narcosis. Decrease in motor functions. Behavioral changes. Cough. Edema. Liver enlargement. Jaundice. Proteinuria.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Methanol	67-56-1	10 - 30
Propargyl Alcohol	107-19-7	10 - 30
Dimethylcocoamine, bis(chloroethyl) ether, diquaternary ammonium salt	68607-28-3	30 - 60
Ethylene Glycol	107-21-1	15 - 40
Glycol Ethers	111-76-2	15 - 40

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin contact	Wash off with warm water and soap. Get medical attention immediately.
Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice.
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.
General advice	Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen. Keep victim warm. Call a physician if symptoms develop or persist. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties	Flammable by OSHA criteria. Containers may explode when heated. Runoff to sewer may cause fire or explosion hazard.

Extinguishing media

Suitable extinguishing media	Water fog. Alcohol foam. Dry chemical. Polymer foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters

In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

6. Accidental Release Measures

Personal precautions

Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.

7. Handling and Storage

Handling

Do not handle or store near an open flame, heat or other sources of ignition. Use only with adequate ventilation. Wash thoroughly after handling. Avoid prolonged exposure.

Storage

Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
Ethylene Glycol	107-21-1	Not established	Not established	100 mg/m3
Glycol Ethers	111-76-2	20 ppm	Not established	Not established
Methanol	67-56-1	200 ppm	250 ppm	Not established
Propargyl Alcohol	107-19-7	1 ppm	Not established	Not established

Components	CAS #	OSHA TWA	STEL	Ceiling
Glycol Ethers	111-76-2	50 ppm	Not established	Not established
Methanol	67-56-1	200 ppm	Not established	Not established

Personal protective equipment

Eye / face protection	Wear chemical goggles. Face-shield.
Skin protection	Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygeine considerations	Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using do not eat or drink. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling and before eating.

9. Physical & Chemical Properties

Appearance	Liquid.
Color	clear, yellow
Odor	pungent or alcoholic
Odor threshold	Not available
Physical state	Liquid.
Form	Liquid.
pH	6 - 8
Melting point	-13 °F (-25.25 °C) estimated
Freezing point	Not available
Boiling point	194 °F (89.53 °C) estimated
Flash point	90 °F (32.2 °C)
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	0.94 - 0.97
Relative density	0.9549 g/cm3 estimated
Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	269.6 °F (132 °C) estimated
Decomposition temperature	Not available
VOC	37.63 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability Risk of ignition. Stable at normal conditions.

Conditions to avoid Heat, flames and sparks.

Incompatible materials May form explosive mixtures with air. Amines. Isocyanates. Strong oxidizing agents. Strong acids. Caustics.

Hazardous decomposition products May include oxides of sulphur. May include oxides of phosphorus.

Possibility of hazardous reactions Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute LD50: 207 mg/kg estimated, Rat, Oral
Acute LD50: 161 mg/kg estimated, Rat, Dermal
Acute LC50: 749 mg/l/4h estimated, Rat, Inhalation
Causes burns.

Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

Ethylene Glycol	107-21-1	Oral LD50 Rat: 4000 mg/kg; Dermal LD50 Rabbit:9530 µL/kg
Glycol Ethers	111-76-2	Inhalation LC50 Rat: 2.21 mg/L/4H; Inhalation LC50 Rat:450 ppm/4H; Oral LD50 Rat:470 mg/kg; Dermal LD50 Rat:2270 mg/kg; Dermal LD50 Rabbit:220 mg/kg
Methanol	67-56-1	Inhalation LC50 Rat: 83.2 mg/L/4H; Inhalation LC50 Rat:64000 ppm/4H; Oral LD50 Rat:5628 mg/kg; Dermal LD50 Rabbit:15800 mg/kg
Propargyl Alcohol	107-19-7	Oral LD50 Rat: 20 mg/kg; Dermal LD50 Rabbit:16 mg/kg

Local effects Liver toxicity.

Chronic effects Hazardous by OSHA criteria. This product may be harmful if it is absorbed through the skin. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Subchronic effects Kidney injury may occur.

Carcinogenicity Not expected to be hazardous by OSHA criteria.

ACGIH - Threshold Limit Values - Carcinogens

Ethylene Glycol	107-21-1	A4 - Not Classifiable as a Human Carcinogen
Glycol Ethers	111-76-2	A3 - Confirmed animal carcinogen with unknown relevance to humans

Neurological effects Hazardous by OSHA criteria.

Further information Symptoms may be delayed.

12. Ecological Information

Ecotoxicity LC50 15.3 mg/L estimated, Fish, 96.00 Hours,
Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Algae Data

Ethylene Glycol	107-21-1	96 Hr EC50 Selenastrum capricornutum: 6500-1300 mg/L

Ecotoxicity - Freshwater Fish Species Data

Ethylene Glycol	107-21-1	96 Hr LC50 Oncorhynchus mykiss: 41000 mg/L; 96 Hr LC50 Lepomis macrochirus: 27500 mg/L; 96 Hr LC50 Oncorhynchus mykiss: 40761 mg/L [static]; 96 Hr LC50 Pimephales promelas: 49000 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 16000 mg/L [static]
Glycol Ethers	111-76-2	96 Hr LC50 Lepomis macrochirus: 1490 mg/L [static]
Methanol	67-56-1	96 Hr LC50 Pimephales promelas: 28100 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 13200 mg/L
Propargyl Alcohol	107-19-7	96 Hr LC50 Pimephales promelas: 1.44 mg/L [flow-through]

Ecotoxicity - Microtox Data

Ethylene Glycol	107-21-1	30 min EC50 Photobacterium phosphoreum: 620.0 mg/L; 30 min EC50 Photobacterium phosphoreum: 620 mg/L; 16 Hr EC50 Pseudomonas putida: 10000 mg/L
Methanol	67-56-1	5 min EC50 Photobacterium phosphoreum: 43000 mg/L; 15 min EC50 Photobacteriur phosphoreum: 40000 mg/L; 25 min EC50 Photobacterium phosphoreum: 39000 mg/l

Ecotoxicity - Water Flea Data

Ethylene Glycol	107-21-1	48 Hr EC50 water flea: 46300 mg/L
Glycol Ethers	111-76-2	24 Hr EC50 water flea: 1720 mg/L; 24 Hr LC50 Daphnia magna: 1698-1940 mg/L
Propargyl Alcohol	107-19-7	48 Hr EC50 water flea: 7.6 mg/L [Static]

Environmental effects

Ecotoxicity - Freshwater Algae Data

Ethylene Glycol	107-21-1	96 Hr EC50 Selenastrum capricornutum: 6500-1300 mg/L

Ecotoxicity - Freshwater Fish Species Data

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13. Disposal Considerations

Waste codes D001: Waste Flammable material with a flash point <140 F

U.S. - RCRA (Resource Conservation & Recovery Act) - P Series Wastes - Acutely Toxic Wastes

Propargyl Alcohol	107-19-7	waste number P102

U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics

Methanol	67-56-1	waste number U154 (Ignitable waste)

Disposal instructions Dispose of this material and its container at hazardous or special waste collection point. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:

Proper shipping name	Flammable liquids, toxic, n.o.s. (Methanol, PROPARGYL ALCOHOL)
Hazard class	3
Subsidiary hazard class	6.1
UN number	UN1992
Packing group	II
Additional information:	
Special provisions	IB2, T7, TP2, TP13
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	243
ERG number	131

Department of Transportation (DOT) Requirements

Bulk

Basic shipping requirements:

Proper shipping name	Flammable liquids, toxic, n.o.s. (Methanol, PROPARGYL ALCOHOL)
Hazard class	3
Subsidiary hazard class	6.1
UN number	UN1992
Packing group	II
Additional information:	
Special provisions	IB2, T7, TP2, TP13
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	243
ERG number	131

Canadian Transportation of Dangerous Goods (TDG) Requirements

Basic shipping requirements:

Proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S. (Methanol, PROPARGYL ALCOHOL)
Hazard class	3
Subsidiary hazard class	6.1
UN number	UN1992
Packing group	II
Additional information:	
Special provisions	16
ERG number	131

IMDG

Basic shipping requirements:

Proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S. (Propargyl Alcohol) (Methanol)
Hazard class	3
Subsidiary hazard class	6.1,
UN number	1992
Packing group	II

IATA

Basic shipping requirements:

Proper shipping name	Flammable liquid, toxic, n.o.s. (Methanol, PROPARGYL ALCOHOL)
Hazard class	3
Subsidiary hazard class	6.1
UN number	1992
Packing group	II

15. Regulatory Information

Labelling

Contains	Dimethylcocoamine, bis(chloroethyl) ether, diquaternary ammonium salt, Ethylene Glycol, Glycol Ethers, Methanol, Propargyl Alcohol

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.

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Ethylene Glycol	107-21-1	1.0 % de minimis concentration
Glycol Ethers	111-76-2	1.0 % de minimis concentration (applies to R-(OCH2CH2)n-OR', where n = 1,2, or 3, R=alkyl C7 or less, or R = phenyl or alkyl substituted phenyl, R' = H or alkyl C7 or less, or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate, Chemical Category N230)
Methanol	67-56-1	1.0 % de minimis concentration
Propargyl Alcohol	107-19-7	1.0 % de minimis concentration

U.S. - FDA - Direct Food Additives

Glycol Ethers	111-76-2	21 CFR 173.315
Methanol	67-56-1	21 CFR 173.250

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Ethylene Glycol: 5000.0000
Methanol: 5000.0000
Propargyl Alcohol: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

International regulations

Canada - WHMIS - Ingredient Disclosure List

Ethylene Glycol	107-21-1	1 %
Glycol Ethers	111-76-2	1 %
Methanol	67-56-1	1 %
Propargyl Alcohol	107-19-7	1 %

State regulations

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

U.S. - Massachusetts - Right To Know List

Ethylene Glycol	107-21-1	Present
Glycol Ethers	111-76-2	Present
Methanol	67-56-1	Present
Propargyl Alcohol	107-19-7	Present

U.S. - Minnesota - Hazardous Substance List

Ethylene Glycol	107-21-1	Present (particulate and vapor)
Glycol Ethers	111-76-2	Skin
Methanol	67-56-1	Skin
Propargyl Alcohol	107-19-7	Skin

U.S. - New Jersey - Right to Know Hazardous Substance List

Ethylene Glycol	107-21-1	sn 0878
Glycol Ethers	111-76-2	sn 0275
Methanol	67-56-1	sn 1222
Propargyl Alcohol	107-19-7	sn 1597

U.S. - Pennsylvania - RTK (Right to Know) List

Ethylene Glycol	107-21-1	Environmental hazard
Glycol Ethers	111-76-2	Present
Methanol	67-56-1	Environmental hazard
Propargyl Alcohol	107-19-7	Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Ethylene Glycol	107-21-1	Toxic; Flammable
Glycol Ethers	111-76-2	Toxic (skin)
Methanol	67-56-1	Toxic; Flammable
Propargyl Alcohol	107-19-7	Toxic (skin)

U.S. - Texas - Effects Screening Levels - Long Term

Ethylene Glycol	107-21-1	10 ppb ESL (46% Ethylene glycol); 26 µg/m3 ESL (46% Ethylene glycol)
Glycol Ethers	111-76-2	5 ppb ESL; 24 µg/m3 ESL
Methanol	67-56-1	200 ppb ESL; 262 µg/m3 ESL
Propargyl Alcohol	107-19-7	1 ppb ESL; 2 µg/m3 ESL

U.S. - Texas - Effects Screening Levels - Short Term

Ethylene Glycol	107-21-1	100 ppb ESL (46% ethylene glycol); 260 µg/m3 ESL (46% ethylene glycol)
Glycol Ethers	111-76-2	50 ppb ESL; 240 µg/m3 ESL
Methanol	67-56-1	2000 ppb ESL; 2620 µg/m3 ESL
Propargyl Alcohol	107-19-7	10 ppb ESL; 20 µg/m3 ESL

16. Other Information

HMIS® ratings

Health: 3*
Flammability: 3
Physical hazard: 0

NFPA ratings

Health: 3
Flammability: 3
Instability: 0

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