Section 1. Product and Company Identification

Product Name Diethylene Glycol Monoethyl Ether
CAS Number 111-90-0

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
(914) 654-6800 **(914) 654-6899**
parchem.com **info@parchem.com**

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture
Physical Hazards
Flammable Liquids (Category 4)

GHS Label Elements

Pictograms:

Signal word: WARNING!

Hazard and precautionary statements
Hazard Statements
H227: Combustible liquid.

Precautionary Statements
Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response: P370+P378: In case of fire; Use water spray, carbon dioxide, dry chemical or alcohol foam for extinction.
Storage: P403+P235: Store in a well-ventilated place. Keep cool.
Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) Not Otherwise Classified (HNOC): None known.

Section 3. Composition / Information on Ingredients

Common Name Diethylene Glycol Monoethyl Ether
Synonym(s) 2-(2-Ethoxyethoxy)ethanol; Glycol Ether DE; DEGEE; Ethoxy Diglycol
CAS Number 111-90-0

COMPONENT	CAS NUMBER	CONCENTRATION
Diethylene Glycol Monoethyl Ether	111-90-0	100%

Section 4. First Aid Measures

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
Eye Contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.
Skin Contact: Wash with soap and water. Get medical attention if symptoms occur.
Ingestion: Seek medical advice.
Most Important Symptoms and Effects, both Acute and Delayed: No known chronic or acute health risks.

Indication of any Immediate Medical Attention and Special Treatment Needed
Hazards: None known.
Treatment: Treat symptomatically.

Section 5. Firefighting Measures

General Fire Hazards: Combustible liquid and vapor.

Extinguishing Media
Suitable Extinguishing Media: Water spray. Dry chemical. Carbon Dioxide. Alcohol foam.
Unsuitable Extinguishing Media: None known.

Special Hazards arising from the Substance or Mixture: Forms peroxides of unknown stability.

Advice for Firefighters
Special Firefighting Procedures: Use water spray to keep fire-exposed containers cool.
Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate personal protective equipment.
Environmental Precautions: Avoid release to the environment.

Methods and Material for Containment and Cleaning up: Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large spillages: flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.
Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Section 7. Handling and Storage

Precautions for Safe Handling: Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not allow to evaporate to near dryness. Do not distill to near dryness. Addition of water or appropriate reducing materials will lessen peroxide formation.
Conditions for Safe Storage, including any Incompatibilities: Keep container tightly closed. Store away from heat and light.

Section 8. Exposure Controls / Personal Protection

Control Parameters
Occupational Exposure Limits: Country specific exposure limits have not been established or are not applicable unless listed below.

Chemical Name: Diethylene glycol monoethyl ether
Type: TWA
Exposure Limit Values: 25 ppm /140 mg/m^3
Source: US. AIHA Workplace Environmental Exposure Level (WEEL) Guides (2009)

Exposure Controls
Appropriate Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual Protection Measures, such as Personal Protective Equipment
General Information: Eye bath. Washing facilities.
Eye/Face Protection: It is a good industrial hygiene practice to minimize eye contact.
Skin Protection: It is a good industrial hygiene practice to minimize skin contact.
Other: No data available.
Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.

Contact health and safety professional or manufacturer for specific information.
Hygiene Measures: Observe good industrial hygiene practices.
Environmental Controls: No data available.

Section 9. Physical and Chemical Properties

Appearance
Form: Liquid
Color: Colorless
Odor: Mild
Odor Threshold: 1.1 ppm
pH: No data available.
Freezing Point: -90°C
Boiling Point: 198°C
Flash Point (Tag Closed Cup): 91°C
Evaporation Rate: Not determined.
Flammability (Solid, Gas): No data available.
Upper Flammability Limit (%): No data available.
Lower Flammability Limit (%): No data available.
Vapor Pressure (20°C): 0.095 mmHg
Vapor Density (Air=1): 4.6
Specific Gravity: 0.99 (20°C)

Solubility(ies)
Solubility in Water: Completely Soluble
Solubility (Other): No data available.
Partition Coefficient (n-Octanol/Water): No data available.
Auto-ignition Temperature: No data available.
Decomposition Temperature: (HPDTA) No exotherm to 500°C
Dynamic Viscosity: 4.5 mPa.s (20°C)
Kinematic Viscosity: 4.54 mm^2/s (20°C)
Explosive Properties: No data available.
Oxidizing Properties: No data available.

Other Information
Minimum Ignition Temperature: 204°C

Section 10. Stability and Reactivity

Reactivity: None known.
Chemical Stability: Stable
Possibility of Hazardous Reactions: Forms peroxides of unknown stability.
Conditions to Avoid: Heat, sparks, flames.
Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon Dioxide. Carbon Monoxide.

Section 11. Toxicological Information

Routes of Exposure
Inhalation: None known.
Ingestion: None known.
Skin Contact: None known
Eye Contact: None known.

Acute Toxicity
Oral LD-50 (Rat): 6,031 mg/kg
Dermal LD-50: (rabbit): 9,143 mg/kg
Inhalation LC50 (Rat, 8 h): > 5.24 mg/L

Repeated Dose Toxicity
NOAEL (Dog, Oral Study): 1,000 mg/kg
NOAEL (Rabbit, Dermal Study): 1,000 mg/kg
NOAEC (rat, Inhalation study:): > 1.06 mg/l

Skin Corrosion/Irritation: Not classified as hazardous.
Product: (Rabbit, 24 h): none
Serious Eye Damage/Eye Irritation: Not classified
Product: (Rabbit, 24 h): none
Respiratory or Skin Sensitization: Not classified
Product: Human experience., (Human) - non-sensitizing

Mutagenicity
In vitro: Salmonella typhimurium assay (Ames test), Bacterial Reverse Mutation Assay: negative +/- activation
In vivo: No data available.

Carcinogenicity: Not classified
Reproductive Toxicity: Based on available data, the classification criteria are not met. Not classified as hazardous.
Specific Target Organ Toxicity - Single Exposure: Not classified
Specific Target Organ Toxicity - Repeated Exposure: Not classified

Aspiration Hazard: No data available.
Other Adverse Effects: No data available.

Section 12. Ecological Information

Acute Toxicity
Fish: LC-50 (Fish, 96 h): 6,010 mg/l
Aquatic invertebrates: EC-50 (daphnid, 48 h): 1,982 mg/l

Chronic Toxicity
Fish: No data available.
Aquatic Invertebrates: NOEC (Ceriodaphnia, 7 d): 7.4 mg/l
Toxicity to Aquatic Plants: EC-50 (Scenedesmus subspicatus, 96 h): > 100 mg/l Read-across from a similar material

Persistence and Degradability
Biodegradation: 100% (16 d) Readily biodegradable

Biological Oxygen Demand: No data available.
Specified Substance(s): Diethylene glycol monoethyl ether
BOD-5: 140 mg/g
BOD-20: 1,900 mg/g

Chemical Oxygen Demand: No data available.
Diethylene glycol monoethyl ether: 1,910 mg/g

BOD/COD Ratio: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT: Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities
Possible Shipping Description(s): NA 1993 Combustible liquid, n.o.s. (diethylene glycol monoethyl ether) combustible liquid III

IMDG - International Maritime Dangerous Goods Code: Class not regulated
Possible Shipping Description(s): Not regulated

IATA: Class not regulated
Possible Shipping Description(s): Not regulated

Section 15. Regulatory Information

Safety, Health, and Environmental Regulations/Legislation Specific for the Substance or Mixture: This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
WHMIS (Canada) Status: Controlled
WHMIS (Canada) Hazard Classification: B/3
SARA 311-312 Hazard Classification(s): Fire hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List: DIETHYLENE GLYCOL MONOETHYL ETHER (GLYCOL ETHERS CATEGORY)
OSHA: Hazardous

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.
DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.
AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.
MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.
ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.KE-10467
Philippines Inventory (PICCS): This product is listed on the Philippine Inventory or otherwise complies with PICCS.
Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

HMIS Rating
Health: 1
Flammability: 2
Reactivity: 1

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 6/4/2015