



GULF OIL  
MATERIAL SAFETY DATA SHEET

GULF PREMIUM HEAVY DUTY ANTIFREEZE

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Product Code: 841118

NFPA HAZARD RATING

4 - Extreme  
3 - High  
2 - Moderate  
1 - Slight  
0 - Insignificant

PRODUCT NFPA HAZARD

Health - 2  
Fire - 1  
Reactivity - 0

DIVISION AND LOCATION---SECTION I

Division: MASTER DISTRIBUTOR OF GULF LUBRICANTS  
Location: AMERICAN REFINING GROUP INC  
77 N. KENDALL AVENUE, BRADFORD, PA, 16701

Emergency Telephone Number: 814-368-1297

Transportation Emergency: CHEMTREC 1-(800) 424-9300 (U.S. and Canada)

CHEMICAL AND PHYSICAL PROPERTIES---SECTION II

Chemical Name: antifreeze/coolant

Formula: not applicable

Hazardous Decomposition Products: carbon monoxide and carbon dioxide from burning.

Incompatibility (Keep away from):

strong oxidizers, bases, acids, and materials reactive with hydroxyl compounds.

Toxic and Hazardous Ingredients

Ethylene Glycol  
Diethylene Glycol

CAS No.

107-21-1  
111-46-6

Range%

70-99  
1-5

Form: liquid

Odor: mild odor

Appearance: clear

Color: red

Specific Gravity (water=1): 1.11

Boiling Point: 227 F (108 C)

Freezing Point: -37C (-34F)

Solubility in Water (by weight %): 100

Vapor Pressure (mm Hg at 20°C): <0.1

Vapor Density (air=1): 2.1

pH (as is): 10-11

Viscosity SUS at 100°F: Less than 100



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FIRE AND EXPLOSION DATA---SECTION III

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**FIRE AND EXPLOSIVE HAZARDS:** Sudden release of hot vapors or mists from process equipment operating at elevated temperatures/pressures, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Published "auto ignition" temperatures cannot be treated as safe operating temperatures in chemical processes without analysis of process conditions.

**EXTINGUISHING MEDIA:** Apply alcohol type or all purpose type foams by manufacturers recommended techniques for large fires.

**SPECIAL FIREFIGHTING INSTRUCTIONS:** Wear self-contained breathing apparatus and protective clothing. Do not spray pool fires directly. A solid stream of water directed into hot, burning liquid can cause frothing.

Flashpoint: 120C (248F)

Flammable limits % : Lower: 3.2

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HEALTH HAZARD DATA---SECTION IV

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Permissible concentrations:

Ethylene Glycol 125 mg/m3 (OSHA PEL) 125 mg/m3 (ACGIH-TLV)

Chronic effects of overexposure: Can cause kidney damage based on repeated exposure. Contains material that may be harmful to the developing fetus based on animal data.

Acute toxicological properties:

Eyes: Will cause eye irritation. Vapors may be irritating and symptoms may include pain, tearing, reddening, swelling and impaired vision.

Skin: May cause slight skin irritation.

Inhalation: Mist or vapors may irritate nose, throat and lungs. Symptoms of irritation may include coughing and difficult breathing. Breathing this material at concentrations above the recommended exposure limits for diethylene glycol and ethylene glycol may cause central nervous system effects. These effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

Ingestion: This material is toxic when ingested. May be very harmful or fatal if swallowed. Ingestion may result in vomiting; aspiration (breathing) of vomit into lungs must be avoided as even small quantities may result in aspiration pneumonitis. Contains ethylene glycol and diethylene glycol which are toxic when swallowed.

Emergency First Aid Procedures:

Eyes: Flush with large amounts of cold water for at least 15 minutes. Do not let victim rub eyes. If irritation develops, contact a physician immediately.



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Skin: Wash affected area with soap and water. Do not reuse clothing soaked with this product until laundered. Discard all leather articles which have been soaked with this product. If irritation develops, contact a physician immediately.

Inhalation: If inhaled, move to fresh air. If victim has stopped breathing give artificial respiration, preferably, mouth to mouth. Contact a physician immediately.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below the hips to prevent aspiration of material into the lungs. Contact a physician immediately.

Note to Physician: Ethylene glycol (EG) and diethylene glycol (DEG) intoxication may cause significant renal, respiratory and central nervous system toxicity. May cause significant acidosis. Consider: Gastric lavage with protected airway, administration of alcohol dehydrogenase inhibitors such as alcohol. Contact a Poison Control Center or toxicologist for guidance.

Pre-existing medical conditions:

May be aggravated by exposure. Constant use resulting in repeated incidence of skin contact may cause skin sensitization and an associated dermatitis in some individuals.

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**SPECIAL PROTECTION INFORMATION---SECTION V**

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Ventilation Type Required Local, mechanical, special): see COMMENTS Section

Respiratory Protection (Specify type): For operations where the TLV may be exceeded, a NIOSH/MSHA approved respirator with an organic vapor cartridge and dust/mist prefilter or a supplied air respirator is recommended. Equipment selection depends on contaminant type and good industrial hygiene practice. For fire fighting, use SCBA.

Protective Gloves: Chemical resistant protective gloves, such as neoprene, recommended where needed to prevent prolonged/repeated skin contact.

Eye Protection: chemical safety goggles

Other Protective Equipment: If contact is unavoidable wear chemical resistive clothing. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered before re-use.

This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty breathing and decreased urine output. When EG was heated above the boiling point of water, vapors are formed which reportedly caused unconsciousness, increased lymphocyte count and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase



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in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings. This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.

**HANDLING OF SPILLS OR LEAKS---SECTION VI**

**Procedures for Clean-Up:**

Eliminate all sources of ignition in vicinity of spilled material. Do not allow spilled material to enter sewers or streams. Add dry material (such as diatomaceous earth, dry clay or sand) to absorb (if large spill, dike to contain). Using recommended protective equipment, pick up bulk of spill and containerize for recovery or disposal. Flush area with water to remove residues.

**Waste Disposal:** All recovered material should be packaged, labeled, transported and disposed or reclaimed in conformance with Good Engineering Practices. Comply with all applicable governmental regulations. Avoid land filling of liquids. Reclaim where possible.

**SPECIAL PRECAUTIONS---SECTION VII**

**Precautions to be taken in handling and storage:** Keep out of reach of children. Avoid eye and prolonged/repeated skin contact. Avoid breathing vapors/mists. Do not store in open or unlabeled containers. Wash exposed skin thoroughly after use. Protect container from physical damage. Store in a cool, well-ventilated area away from open flames and heat. Do not cut or weld on or near container, even empty. Do not reuse empty containers unless properly cleaned. Do not drink antifreeze.

**Maximum Storage Temperature:** 60°C (140°F)

**TRANSPORTATION DATA---SECTION VIII**

**D.O.T:** Regulated

**U.S. D.O.T Proper Shipping Name:** Other regulated substance, Liquid N.O.S. (contains ethylene glycol), NA 3082, RQ

**U.S. D.O.T Hazard Class:** 9

**Packing Group:** III



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I. D. Number: NA 3082

Label(s) Required: See Special Transportation Notes.

Reportable Quantity: 5000 lbs

Freight Classification: Antifreeze/coolant

Special Transportation Notes: Label: Shipments with individual containers of over 5000 lbs are regulated bulk shipments: Class 9 placard or plain white placard with "3082"

Emergency Response Guidebook: 171

ENVIRONMENTAL/SAFETY REGULATIONS---SECTION IX

Section 313 (Title III Superfund Amendment and Reauthorization Act):

CERCLA Reportable Quantity (RQ): 5,000 lbs ethylene glycol. This product contains the following chemicals subject to SARA Title III, Section 313, reporting: Ethylene Glycol, CAS# 107-21-1. State This product or all components of this product are listed on the US TSCA Inventory of Chemical Substances.

COMMENTS

Pennsylvania Worker And Community Right To Know Act: This product contains the following ingredients(s):

Ethylene Glycol CAS No. 11-46-6

Prepared by: Monica C Mathers

Title: Product Compliance Coordinator

Original Date: 03/30/09

Revision Date:

Supersedes:

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