

MATERIAL SAFETY DATA SHEET

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Product Code: Multiple

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 76 Antifreeze and Coolant
Product Code: Multiple
Generic Name: Automotive chemical
Chemical Family: Glycols

Responsible Party: 76 Lubricants Company
A Division of TOSCO Corporation
72 Cummings Point Road
Stamford, CT
06901

For further information contact Help Desk
8am - 4pm Pacific Time, Mon-Fri: 1-800-762-0942

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:

For Chemical Emergencies:
Spill, Leak, Fire or Accident
Call CHEMTREC
North America: (800)424-9300
Others: (703)527-3887 (collect)

For Health Emergencies:
San Francisco Poison
Control Center
Cont. US: (800)356-3129
Outside US: (415)821-5338

Health Hazards: May be harmful or fatal if swallowed. Poisonous to animals. Causes eye irritation. Probable birth defect hazard based on animal data. Overexposure may cause damage to the kidneys and liver. Use with adequate ventilation. Avoid exposure during pregnancy. Do not breathe vapor or mist. Do not get in eyes, on skin or on clothing. Do not taste or swallow. Wash thoroughly after handling.

Physical Hazards: This material may burn, but will not ignite readily. Keep away from all sources of ignition.

- ▶ Physical Form: Liquid
- ▶ Appearance: Clear green
- ▶ Odor: Glycol

NFPA HAZARD CLASS: Health: 1 (Slight)
Flammability: 1 (Slight)

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Reactivity: 0 (Least)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>HAZARDOUS COMPONENTS</u>	<u>% Weight</u>	<u>EXPOSURE GUIDELINE</u>		
		<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Ethylene Glycol CAS# 107-21-1	83	50 ppm	ACGIH	CEIL
Diethylene Glycol CAS# 111-46-6	6-16	Not Established		

<u>OTHER COMPONENTS</u>	<u>% Weight</u>	<u>EXPOSURE GUIDELINE</u>		
		<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Dipotassium Phosphate CAS# 7758-11-4	0-7	Not Established		

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

Eye: Eye irritant. Contact may cause stinging, watering, redness, and swelling.

Skin: Contact may cause mild skin irritation including redness, burning sensation, and drying and cracking of the skin. Contact may result in skin absorption but symptoms of toxicity are not anticipated by this route alone under normal conditions of use.

Inhalation (Breathing): No information available on acute toxicity. See signs and symptoms.

Ingestion (Swallowing): Toxic. May be harmful if swallowed.

Signs and Symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, coughing, nausea, vomiting, diarrhea, transient excitation

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followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, and fatigue), abdominal cramping, abdominal pain, muscle contractions, irregular heartbeats (arrhythmias), hypotension, pulmonary edema (accumulation of fluids in the lungs), visual disturbances, kidney damage, cardiac failure, convulsions and coma.

Cancer: Inadequate data available to evaluate the cancer hazard of this material.

Target Organs: Overexposure may cause injury to the kidney (see Section 11). Overexposure may cause injury to the liver (see Section 11).

Developmental: Potential hazard to the fetus (see Section 11).

Other Comments: Persons with pre-existing kidney disease may be more susceptible to potassium poisoning (hyperkalemia).

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painters' Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders, respiratory (asthma-like) disorders, kidney disorders and liver disorders.

4. FIRST AID MEASURES

Eye: Move victim away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek medical attention. For direct contact, hold eyelids apart and flush the affected eye(s) with clean water for at least 15 minutes. Seek medical attention.

Skin: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should

be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): If swallowed, seek emergency medical attention. If victim is drowsy or unconscious and vomiting, place on the left side with the head down and do not give anything by mouth. If victim is conscious and alert and ingestion occurred within the last hour, vomiting should be induced for ingestions of more than 1 swallow (1-2 tablespoons for an adult) preferably under direction from a physician or poison center. If possible, do not leave victim unattended and observe closely for adequacy of breathing.

Note To Physicians: This material contains ethylene glycol. Toxic metabolites of this material may cause acidosis, coma, convulsions, renal failure, or circulatory collapse. Ethanol blocks the formation of glycolic acid and therefore is the antidote of choice. Because of the rapid conversion (3-hour elimination half-life) of the ethylene glycol, ethanol should be administered as soon as possible in cases of severe poisoning. If medical care will be delayed several hours, use 3-4 one-ounce oral (shots) of 86-proof whiskey before or during transport to the hospital. The use of intravenous ethanol and hemodialysis effectively removes ethylene glycol and glycolic acid from the body.

5. FIRE FIGHTING MEASURES

Flammable Properties: Flash Point: 250°F/121°C (COC)
OSHA Flammability Class: Not applicable
LEL/UEL: No Data
Autoignition Temperature: 775°F

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, or polar or alcohol foam, or water spray is recommended. Water or foam can cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the danger area should wear bunker gear.

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When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should also be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate danger area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate danger area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Use water sparingly to reduce disposal requirements. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended.

7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.

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"Empty" containers retain residue (liquid and/or vapor) and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to Occupational Safety and Health Administration Regulations, ANSI Z49.1 and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE):

Respiratory: Wear a positive pressure air supplied respirator in situations where there may be potential for airborne exposure above exposure limits (see Section 2). This product has poor warning properties or appropriate air purifying cartridges are not commercially available. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impermeable to the specific material handled is advised to prevent skin contact, possible irritation, and absorption (see glove manufacturer literature for information on permeability).

Eye/Face: Approved eye protection to safeguard against

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potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Flash Point: 250°F / 121°C (COC)
Flammable/Explosive Limits (%): No Data
Autoignition Temperature: 775°F
Appearance: Clear green
Physical State: Liquid
Odor: Glycol
pH: No Data
Vapor Pressure (mm Hg): 18
Vapor Density (air=1): >1
Boiling Point: 330°F / 166°C
Freezing/Melting Point: No Data
Solubility in Water: 100%
Specific Gravity: 1.14 @ 15°C
Percent Volatile: Negligible
Evaporation Rate (nBuAc=1): <1
Bulk Density: 9.46 lbs/gal

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of storage and handling.

Conditions To Avoid: None Known

Incompatible Materials: Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: Combustion can yield carbon dioxide and carbon monoxide.

Hazardous Polymerization: Will not occur.

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11. TOXICOLOGICAL INFORMATION

Ethylene Glycol (CAS# 107-21-1)

Target Organ(s): Ingestion of ethylene glycol by humans results in kidney damage (severe renal epithelial damage and oxalate crystals in the tubules). Administration of ethylene glycol resulted in hepatocellular hyaline degeneration in male mice fed diets containing 12,500 or 25,000 ppm ethylene glycol and female mice fed diets containing 50,000 ppm ethylene glycol.

Developmental: Ethylene glycol caused malformations in the offspring of mice and rats when administered by gavage or in the drinking water during organogenesis. It was not teratogenic when fed in the diet, by dermal application of up to 3550 mg/kg/day or by nose-only inhalation at up to 2500 mg/m³. No effects on fertility or reproductive performance were seen in a three-generation study in rats exposed orally.

Diethylene Glycol (CAS# 111-46-6)

Target Organ(s): Accidental human ingestion of diethylene glycol resulted in kidney damage (severe renal epithelial damage, tubular necrosis, and anuria). Liver damage (vacuolation and hyaline degeneration) was also seen in rats fed diets containing 1 to 4% diethylene glycol for 2 years.

12. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized for toxicity prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

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13. TRANSPORT INFORMATION

Hazard Class or Division: Not classified as hazardous

14. REGULATORY INFORMATION

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

<u>COMPONENT</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Ethylene Glycol	107-21-1	83

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

<u>COMPONENT</u>	<u>EFFECT</u>
Ethylene Glycol	Reproductive Toxicant

This material has not been identified as a carcinogen by NTP, IARC, or OSHA.

EPA (CERCLA) Reportable Quantity:

RQ #1 Ethylene Glycol
5000 lb equal to 6024 lb, (637 gal), of this material.

15. DOCUMENTARY INFORMATION

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Previous Issue Date: 01/10/97
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Previous Product Code: 06940

16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY**

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