

MATERIAL SAFETY DATA SHEET
PENNZOIL® ANTIFREEZE AND SUMMER COOLANT

1. PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 950

Version Date: 8/15/2001

Product Name: PENNZOIL® ANTIFREEZE AND SUMMER COOLANT

Product Use: Coolant

Synonyms: No information available

Manufacturer

Pennzoil-Quaker State Company
P.O. Box 2967
Houston, TX 77252-2967
USA

Phone Numbers

Medical Emergency: 1-800-546-6040
Transportation Emergency (USA): 1-800-535-5053
Transportation Emergency (International):
1-352-323-3500 (Call Collect)
MSDS Assistance: 1-800-546-6227
Fax On Demand: 1-800-546-6227
Technical Assistance: 1-800-458-4998
Customer Service: 1-800-468-8397
Fax Number: 713-217-3181
Internet Address: www.MSDS.PZLQS.com

2. COMPONENT INFORMATION

Component	CAS No.	Weight Percent Range	Hazardous in Blend
ETHYLENE GLYCOL	107-21-1	80 - 95	Yes
WATER	7732-18-5	3 - 10	No
DIPOTASSIUM PHOSPHATE	7758-11-4	< 3	Yes
TRISODIUM ORTHOPHOSPHATE	7601-54-9	< 1	No
SODIUM PHOSPHATE, DIBASIC	7558-79-4	< 1	No
DIETHYLENE GLYCOL	111-46-6	< 9	Yes

This product is **HAZARDOUS** according to OSHA 29 CFR 1910.1200.

Hazards:

Flammable/Combustible **Acute Toxin** **Chronic Toxin** **Carcinogen**
Pressure **Reactive** **Exposure Limit** **Target Organ** **Other**

Other: No information available

3. HAZARDS IDENTIFICATION

Emergency and Hazards Overview

WARNING: HARMFUL OR FATAL IF SWALLOWED. May cause irritation to eyes and respiratory tract. Can cause central nervous system, cardiopulmonary or kidney disorders. Birth defect hazard based on animal data.

If swallowed, **IMMEDIATELY** contact a poison control center, emergency treatment center, or physician.

NFPA Ratings: **Health** 2 **Flammability** 1 **Reactivity** 0

Primary Route of Exposure: **Skin** **Inhalation** **Eye**

Health Effect Information

Eye Contact: Avoid eye contact. This product may be slightly irritating to the eyes upon direct contact.

This product has a low vapor pressure and is not expected to present a hazard to the eyes at ambient conditions. Exposure to mists and vapors may be irritating to the eyes.

Skin Contact: Avoid skin contact. Prolonged or repeated contact may result in slight skin irritation.

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Inhalation: Avoid prolonged inhalation of mist or vapors. This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product. This product may be considered a low health hazard unless inhaled in very high concentrations. Acute and chronic overexposures may be irritating to the respiratory tract. Symptoms of overexposure include respiratory tract irritation, headache, drowsiness and narcosis. See Section 11 - Toxicological Information.

Ingestion: Do not ingest. Harmful or fatal if swallowed. Signs and symptoms include behavioral disorders, drowsiness, vomiting, diarrhea, visual disturbances, thirst, convulsions, cyanosis, and rapid heart rate. Signs and symptoms are central nervous system stimulation followed by depression, cardiopulmonary effects, and later potentially fatal kidney damage. See Section 11 - Toxicological Information.

Medical Conditions Aggravated by Exposure: No information available

Other: A hazard due to inhalation may exist in circumstances where ethylene glycol is handled hot or where agitation or other mechanical operations may create an excessive fog or heavy mist. Ethylene glycol is not readily absorbed through skin in acutely toxic amounts. However, animal studies and human case reports suggest that absorption through the skin repeatedly over a prolonged period of time can present a health hazard.

4. FIRST AID INFORMATION

Eye Contact: Immediately flush eyes with large amounts of water and continue flushing for 15 minutes or until irritation subsides. If irritation persists, seek medical attention.

Skin Contact: Wash contaminated area thoroughly with soap and water.

Inhalation: This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. If vapor or mist is generated when the material is heated or handled, remove victim from exposure. If discomfort persists seek medical attention.

Ingestion: If person is conscious, give large quantities of water immediately. Induce vomiting. Seek immediate medical attention. Do not attempt to give anything by mouth to an unconscious person.

Notes to Physician: Immediate medical treatment is imperative, especially if a large dose has been ingested. Administer alkali to correct acidosis. Hemodialysis is effective in the management of poisoning. Intravenous administration of ethanol has been effective.

Other: No information available

5. FIRE AND EXPLOSION INFORMATION

Flammable Properties

Flash Point: 244 F, 117.8 C

Test Method: ASTM D-93 (P.M.C.C.)

Flammable Limits in Air

Upper Percent: No data available

Lower Percent: 3.2%

Autoignition Temperature: No data available

Test Method: No information available

NFPA Classification: Class III-B combustible liquid

Extinguishing Media: Use dry chemical, alcohol foam, or carbon dioxide.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: Water may be ineffective but can be used to cool containers exposed to heat or flame to prevent vapor pressure buildup and possible container rupture. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual Fire and Explosion Conditions: Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

Hazardous Combustion By-Products: No information available

Other: No information available

6. ACCIDENTAL RELEASE MEASURES

Personnel Safeguards: Consult Health Effect Information in Section 3, Personal Protection Information in Section 8, Fire and Explosion Information in Section 5, and Stability and Reactivity Information in Section 10.

Regulatory Notifications: Notify appropriate authorities of spill.

Containment and Clean up: Contain spill immediately. Do not allow spill to enter sewers or watercourses. Absorb with appropriate inert material such as sand, clay, etc. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

Other: No information available

7. HANDLING AND STORAGE INFORMATION

Handling: No special handling procedures are necessary.

Storage: Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials.

Empty Container Warnings

Drums: Empty containers retain product residue and can be dangerous.

Plastic: Do not reuse this container. Empty container may retain product residues.

Other: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

Component	CAS No.	Exposure Limit
ETHYLENE GLYCOL	107-21-1	ACGIH - TLV: Ceiling 50 ppm

Personal Protective Equipment

Eye/Face Protection: Eye protection is not required under conditions of normal use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety goggles.

Skin Protection: Skin protection is not required under conditions of normal use. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. Impervious clothing should not consist of polyvinyl alcohol. Launder soiled clothes.

Respiratory Protection: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified.

Personal Hygiene: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking.

Engineering Controls / Work Practices

Ventilation: General room ventilation is normally sufficient to prevent buildup of hazardous concentrations. If vapor or mist is generated when the material is heated or handled, adequate ventilation must be provided.

Other: No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Fluorescent green or blue	
Odor: Glycol	Vapor Pressure: < 0.1 mm Hg @ 68 F
Physical state: Liquid	Vapor Density (air=1): 2.1
pH: No data available	Percent Volatile by Volume: No data available
Boiling Point: 388 F, 197.8 C	Volatile Organic Content: No data available
Melting Point: -8 F, -22.2 C	Molecular Weight: No data available
Specific Gravity: 1.13	Average Carbon Number: No data available
Pour Point: No data available	Viscosity @ 100 F: No data available
	Viscosity @ 40 C: No data available
Solubility in Water: Completely soluble in water	
Octanol / Water Coefficient: Log K_{ow} = No data available	

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: None

Incompatible Materials to Avoid: May react with strong oxidizing agents.

Other: No information available

11. TOXICOLOGICAL INFORMATION

Primary Eye Irritation: 15-25/110 (Draize-rabbit); slightly irritating for ethylene glycol.

Primary Skin Irritation: 0.5-3.0/8.0 (Draize-rabbit); slightly irritating for ethylene glycol.

Acute Dermal Toxicity: No information available

Subacute Dermal Toxicity: No information available

Dermal Sensitization: No information available

Inhalation Toxicity: If warning discomfort from excessive concentrations are heeded, no health problems are expected. May lead to kidney, liver, blood and CNS disorders.

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Inhalation Sensitization: No information available

Oral Toxicity: Ingestion of small quantities (100 ml) of ethylene glycol may be fatal.

Mutagenicity: The absence of carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

Carcinogenicity: Based on data from long-term animal studies, ethylene glycol does not pose a carcinogenic risk to humans.

Reproductive and Developmental Toxicity: Ethylene glycol has been shown to produce reproductive and developmental effects in experimental animals. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. The relevance of these reproductive and developmental animal studies to human exposures to ethylene glycol is currently unknown.

Teratogenicity: Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses.

Immunotoxicity: No information available

Neurotoxicity: No information available

Other: No information available

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: This product is practically non-toxic to aquatic organisms on an acute basis - LC50 > 100 mg/L.

Terrestrial Toxicity: No information available

Chemical Fate and Transport: Bioconcentration potential is low (Log Kow < 3).

Other: No information available

13. DISPOSAL INFORMATION

Regulatory Information: All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled.

Waste Disposal Methods: Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

Other: No information available

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)

Highway / Rail (Bulk): Not Regulated

Highway / Rail (Non-Bulk): Not Regulated

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping descriptions.

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International Information

Vessel: IMDG Regulated: IMDG Not Regulated:
Air: ICAO Regulated: ICAO Not Regulated:

Other: No information available

15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.

Health & Safety: 10 - IARC carcinogen, 11 - NTP carcinogen, 12 - OSHA carcinogen, 15 - ACGIH TLV, 16 - OSHA PEL, 17 - NIOSH exposure limit, 20 - US DOT Appendix A, Hazardous substances, 22 - FDA 21 CFR Total food additives, 23 - NFPA 49 or 325

Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depleters, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCM1, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water - ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US - TSCA Section (12)(b) - export notification

State Lists: 60 - CA - Proposition 65, 61 - FL - Substances, 62 - MI - Critical materials, 63 - MA - RTK, 64 - MA - Extraordinarily hazardous substances, 65 - MN - Hazardous substances, 66 - PA - RTK, 67 - NJ - RTK, 68 - NJ - Environmental hazardous substances, 69 - NJ - Special hazardous substances

Inventories: 80 - Canada - Domestic substances, 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea - Existing and evaluated chemical substances, 84 - US - TSCA, 85 - China Inventory

Regulatory Search Results:

DIETHYLENE GLYCOL: 23, 33, 35, 50, 65, 66, 69, 80, 81, 82, 83, 84, 85

DIPOTASSIUM PHOSPHATE: 22, 50, 80, 81, 82, 83, 84, 85

ETHYLENE GLYCOL: 15, 20, 23, 30, 33, 35, 42, 46, 50, 61, 63, 65, 66, 67, 68, 69, 80, 81, 82, 83, 84, 85

SODIUM PHOSPHATE, DIBASIC: 20, 22, 43, 50, 63, 66, 67, 80, 81, 82, 83, 84, 85

TRISODIUM ORTHOPHOSPHATE: 20, 22, 43, 63, 65, 66, 67, 80, 81, 82, 83, 84, 85

WATER: 80, 81, 83, 84, 85

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313:

<u>Chemical</u>	<u>CAS Number</u>	<u>Percent in Product</u>
ETHYLENE GLYCOL	107-21-1	< 95

IARC: No information available

SARA 311 / 312 Categories

Acute: Chronic: Fire: Pressure: Reactive:

Not Regulated:

Canadian WHMIS Classification

Class D - Poisonous and infectious material, Division 2B, Toxic Material
Class D - Poisonous and infectious material, Division 1B, Toxic Material
Class D - Poisonous and infectious material, Division 2A, Very Toxic Material

European Union Classification**Hazard Symbols:**

Harmful / Xn / X in square.

Risk Phrases:

R22: Harmful if swallowed.

Safety Phrases:

S2: Keep out of the reach of Children.

Other: No information available

16. OTHER INFORMATION**Health and Environmental Label Language**

WARNING: HARMFUL OR FATAL IF SWALLOWED. May cause irritation to eyes and respiratory tract. Can cause central nervous system, cardiopulmonary and kidney disorders. Birth defect hazard based on animal data.

ATTENTION: Contains ethylene glycol, CAS No.: 107-21-1; diethylene glycol, CAS No.: 111-46-6; water, CAS No.: 7732-18-5; dipotassium phosphate, CAS No.: 7758-54-9; disodium phosphate, CAS No.: 7558-79-4.

PRECAUTIONARY MEASURES: DO NOT DRINK ANTIFREEZE OR SOLUTION.

Avoid eye contact. Avoid breathing of mists and vapors. Wash thoroughly after handling. Do not store in open or unlabeled containers.

FIRST AID: If swallowed, **IMMEDIATELY** contact a poison control center, emergency treatment center, or physician. In case of eye contact, flush eyes thoroughly.

NOTE TO PHYSICIAN: Treatment involves the infusion of ethanol, alkali and a diuretic and hemodialysis. Early treatment is extremely important.

INSTRUCTIONS IN CASE OF FIRE OR SPILL: Use water spray, carbon dioxide or dry chemical for small fires, foam for large fires. In case of spill, soak up with absorbent material.

DISPOSAL OF USED ANTIFREEZE/COOLANT

Observe local laws and regulations. Used antifreeze recycling is recommended. Do not drain on the ground or into storm drainage systems. May dispose in sanitary sewer systems only where permitted by local authorities.

MSDS Revisions**Previous Version Date:** 3/27/1995**Previous Version Information**

Revised -

Section 2 - Component Information.

Section 3 - Hazards Identification.

Section 5 - Fire Explosion Information.

Other

No information available

Prepared By:

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PENNZOIL® ANTIFREEZE AND SUMMER COOLANT

Pennzoil-Quaker State Company
Environmental, Safety, Health, & DOT Compliance
P.O. Box 2967
Houston, TX 77252-2967 USA

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