



Material Safety Data Sheet
LA2729
Antifreeze Universal Heavy Duty

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: LA2729
Product Name: Antifreeze Universal Heavy Duty
Synonyms: Coolant. Antifreeze.
Chemical Family: Glycol
Application: Coolant and antifreeze formulations.

Distributed By:
Univar Canada Ltd.
9800 Van Horne Way
Richmond, BC
V6X 1W5

Prepared By: The Safety, Health and Environment Department of Univar Canada Ltd.
Preparation date of MSDS: 03/18/2004
Telephone number of preparer: 1-866-686-4827

24-Hour Emergency Telephone Number (CHEMTREC): (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredients	Percentage	LD50s and LC50s Route & Species:
Ethylene Glycol 107-21-1	90-98	Oral LD50 (Rat) 4700 mg/kg Oral LD50 (Mouse) 5500 mg/kg Dermal LD50 (Rabbit) 9530 µL/kg

Notes: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:
Eye Contact: Causes mild eye irritation.
Skin Contact: Causes mild skin irritation.
Inhalation: Causes mild respiratory irritation. May irritate the lungs.
Ingestion: Harmful if swallowed. POISON, may be fatal if ingested.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Wash contaminated skin with mild soap and water for 15 minutes. Get medical attention if irritation persists.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

Ingestion: Do not induce vomiting. Seek immediate medical attention.

Notes to Physician: Treatment with ethanol to inhibit the metabolism of glycol to oxalate. Early administration of ethanol may counter the toxic effects of ethylene glycol (cardiopulmonary effects attributed to metabolic acidosis and renal damage). Hemodialysis or peritoneal dialysis have been of benefit.

5. FIRE FIGHTING MEASURES

Flash Point: 116.1 °C / 241 °F

Flash Point Method: Tag Closed Cup

Autoignition Temperature: 412.78 °C / 775 °F

Flammable Limits in Air (%): Lower: 3.2 Upper: 15.3

Extinguishing Media: Use DRY chemicals, CO₂, alcohol foam or water spray.

Special Exposure Hazards: Combustible in presence of open flames and sparks.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed. Consult local authorities.

Procedure for Clean Up: Absorb with an inert dry material and place in an appropriate waste disposal container.

7. HANDLING AND STORAGE

Handling: Avoid contamination with reactive substances. Wash thoroughly after handling.

Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator.

Gloves: Impervious gloves.

Skin Protection: No special protective clothing is required.

Eyes: Safety glasses or goggles.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Ethylene Glycol	100mg/m ³ Ceiling	125 mg/m ³ Ceiling 50 ppm Ceiling	Not Available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Viscous Liquid

Color: Green.

Odor: Odorless

pH 9 - 11

Specific Gravity: 1.115 - 1.145

Boiling Point: 197 °C / 386.6 °F
Freezing/Melting Point: -13 °C / 8.6 °F
Vapor Pressure: 0.06 mmHg @ 20C
Vapor Density: 2.1
% Volatile by Volume: 0% w/w
Evaporation Rate: 0.01
Solubility: Soluble in water.
VOCs (lbs/gallon): Not Available.
Viscosity: Not Available.
Molecular Weight: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None known.
Materials to Avoid: Oxidizing agents. Acids. Alkalis.
Hazardous Decomposition Products: When heated to decomposition, it emits acrid smoke and irritating fumes.
Additional Information: No additional remark.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Harmful if swallowed. POISON, may be fatal if ingested.
Skin Contact: Causes mild skin irritation.
Inhalation: Causes mild respiratory irritation. May irritate the lungs.
Eye Contact: Causes mild eye irritation.

Additional Information: Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material. Repeated overexposure may cause liver and kidney effects. Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and nystagmus.

Acute Test of Product:

Acute Oral LD50: Not Available.
Acute Dermal LD50: 9530 Rabbit
Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Ethylene Glycol	Not listed.	A4 - Not Classifiable as a Human Carcinogen (aerosol)

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals. Specifically, growth retardation and decreased litter size in rats and mice and decreased mating frequency in mice were observed. 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. 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. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations of 150, 1000 and 2500 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 2500 mg/m³) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m³). The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity. A three generation study indicated that ethylene glycol did not affect reproductive parameters at dietary concentrations up to 1.0 gm/kg/day in any generation. 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. 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. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations of 150, 1000 and 2500 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 2500 mg/m³) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m³). The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Ethylene Glycol	LC50 (bluegill) 27500 mg/L LC50 (goldfish) 27500 mg/L LC50 (rainbow trout) 41000 mg/L	Not Available.	Not Available.

Other Information:

No additional remark.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: Not Regulated.

DOT Hazardous Class: Not Applicable.

DOT UN Number: Not Applicable.

DOT Packing Group: Not Applicable.

DOT Reportable Quantity (lbs): Not Applicable.

Notes: No additional remark.

Marine Pollutant: No.

ICAO/IATA:

IATA Proper Shipping Name: Not Regulated.

IATA Hazard Class: Not Applicable.

UN Number: Not Applicable.

Packing Group: Not Applicable.

IATA Label: Not Applicable.

IATA Remarks: No additional remark.

IMDG:

IMDG Proper Shipping Name: Not Regulated.

Hazard Class: Not Applicable.

UN Number: Not Applicable.

Packing Group: Not Applicable.

Marine Pollutant: No.

IMDG Label: Not Applicable.

Remarks: No additional remark.

TDG (Canada):

TDG Proper Shipping Name: Not Regulated.

Hazard Class: Not Applicable.

UN Number: Not Applicable.

Packing Group: Not Applicable.

Note: No additional remark.

Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or exempt.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Ethylene Glycol	Not Listed.	LISTED	LISTED

California Proposition 65: Not Listed.

MA Right to Know List: Not Listed.

New Jersey Right-to-Know List: Not Listed.

Pennsylvania Right to Know List: Not Listed.

WHMIS Hazardous Class:

D2A VERY TOXIC MATERIALS



16. OTHER INFORMATION

Additional Information:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer:

NOTICE TO READER:

Univar, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar Sales Office.

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END OF MSDS