



GLENGARRY CHEMICALS LTD.
33 Melford Drive, Unit 6
Scarborough, ON M1B 2G6
Phone: 416-757-1333 Fax: 416-757-9793

**MATERIAL SAFETY
DATA SHEET**

Emergency Telephone Numbers:

CANUTEC: 1-613-996-6666
POISON CONTROL CENTRE: 1-800-268-9017

W.H.M.I.S. CLASSIFICATION: D1A,D2B

SECTION I PRODUCT INFORMATION

Product Name : Ethylene Glycol Inhibited
Product Use : Freeze Point Depressant
Chemical Family : Glycol
Chemical Formula : C₂H₆O₂

SECTION II HAZARDOUS INGREDIENTS

COMPONENTS	Wt / Wt %	LD ₅₀ Oral-rat	HAZARD	CAS NO.
Ethylene Glycol	60 to 100	4700 mg/Kg	Toxic	107-21-1

SECTION III PHYSICAL STATE

Appearance and Physical State : Clear and Colourless Liquid
Odour : None Boiling Point (°C) : 198
Specific Gravity (water = 1) : 1.10 - 1.15 Freezing Point (°C) : -13
Vapour Pressure (mm Hg) : 0.05 mm @20C % Volatile (by weight) : Not Available
Vapour Density (air = 1) : 2.1 pH Product : 8.5 - 10.5
Evaporation Rate : Not Available pH 1% Solution :
Solubility in Water : Miscible Coefficient of Water/Oil Distribution : Not Available

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flammability: Combustible Liquid
Upper Explosive Limit : 3.2 % (V/V) Lower Explosive Limit : 15.3% (V/V)
Flash Point : 111 C
Means of Extinction: Appropriate for surrounding materials.
Special Procedures : Self contained breathing apparatus and protective clothing should be worn in fighting all fires involving chemicals.

SECTION V HEALTH HAZARD DATA

A - EFFECTS OF ACUTE OVEREXPOSURE

EYES: Causes irritation, redness and pain.

SKIN: May cause irritation.

INHALATION: Vapor inhalation is generally not a problem unless heated or misted. Exposure to vapors over an extended time period has caused throat irritation and headache. May cause nausea, vomiting, dizziness and drowsiness. Pulmonary edema and central nervous system depression may also develop.

INGESTION: Initial symptoms in massive dosage parallel alcohol intoxication, progressing to CNS depression, vomiting, headache, rapid respiratory and heart rate, lowered blood pressure, stupor, collapse, and unconsciousness with convulsions. Death from respiratory arrest or cardiovascular collapse may follow.

B - EFFECTS OF CHRONIC OVEREXPOSURE

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 inhalation of ethylene glycol may produce signs of central nervous system involvement, particularly dizziness and nystagmus (involuntary eye movement). Exposure may place individuals with existing heart problems at added risk of potential cardiac irregularities and heart failure. In animals , effects have been reported on the kidney and liver.

SECTION VI EMERGENCY AND FIRST AID

EYES: Wash with copious amount of cold water for at least 20 minutes keeping eyelids open. If irritation persists, repeat flushing. Obtain medical attention immediately.

SKIN: Immediately wash the affected areas with plenty of water. If irritation, redness or burning sensation develops obtain medical advice.

INHALATION: Remove to fresh air.

INGESTION: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get Medical Attention Immediately.

SECTION VII TOXICOLOGICAL DATA

Exposure Limits: OSHA (PEL) / ACGIH - TLV: 50 ppm

Carcinogenicity: The ingredients of this product are not classified as carcinogens by ACGIH or IARC, not regulated as carcinogen by OSHA, and not listed as carcinogen by NTP.

Reproductive Effects: Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the major and possibly only route of exposure to produce birth defects. Exposures by inhalation or skin contact, the primary routes of occupational exposure, had minimal effect on the fetus, in animal studies.

Mutagenic Effects: 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.

Teratogenic Effects: 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.

Sensitization: See Section V (B)

Routes of Entry: Ingestion, Inhalation, Skin and eye absorption.

SECTION VIII SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Spilled Or Released:

Wear protective equipment. Extinguish all ignition sources. Contain spill, soak up with non-combustible absorbent and collect for disposal.

Disposal Procedures:

Follow your local, provincial, and federal government chemical disposal regulations.

SECTION IX PROTECTION INFORMATION

Engineering Controls: Local Exhaust.

Respiratory Protection: Not normally required.

Protective Clothing: Chemical resistant Gloves, apron or impervious protective clothing.

Eye Protection: Safety Glasses.

Other Protective Equipment: Eye Wash Station and Safety Shower.

SECTION X REACTIVITY DATA

Stability: Stable.

Conditions to Avoid: Heat, flames, ignition sources, water (absorbs readily) and incompatibles.

Hazardous Polymerization: Will Not Occur.

Incompatibility to Other Substances: Strong oxidizing agents. Reacts violently with chlorosulfonic acid, oleum, sulfuric acid, perchloric acid. Causes ignition at room temperature with chromium trioxide, potassium permanganate and sodium peroxide; causes ignition at 212F(100C) with ammonium dichromate, silver chlorate, sodium chloride and uranyl nitrate.

Hazardous Combustion Products: Thermal decomposition products are toxic and may include carbon dioxide and carbon monoxide, when heated to decomposition. May produce acrid smoke and irritating fumes.

SECTION XI HANDLING AND STORAGE PRECAUTIONS

Keep containers closed when not in use. Avoid storage at high temperatures, and away from sources of ignition. Use appropriate safety equipment, and exercise normal "good" industrial hygiene and housekeeping practices. Wash thoroughly with soap and water after handling.

SECTION XII FURTHER INFORMATION

TDG CLASSIFICATION:

Shipping Name: NOT REGULATED

UN Number: Not Applicable **Class:** Not Applicable **Packing Group:** Not Applicable

Preparation Information:

Prepared By: Regulatory Department

Revision Date: 1-Oct-14 **Preparation Date:** 21-Mar-01

The information supplied above is presented in good faith and has been derived from sources believed to be reliable. However, no warranty, express or implied, is extended regarding its accuracy or the results to be obtained from its use. Products supplied by our company are sold under the condition that liability for any personal injury or damage whatsoever to any property real or personal arising from the handling or use will, in all cases, remain with the handler or user.