

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

CAS Number: 1569-01-3 (Glycol Ether PNP)
Product Name: Glycol Ether PNP
Revision Date: Oct 16, 2020 **Date Printed:** Oct 23, 2020
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Thames River Chemical Corp.
Address: 5230 Harvester Road Burlington, ON, CA, L7L 4X4
Emergency Phone: CHEMTREC (800) 424-9300
Information Phone Number: 905-681-5353
Fax: 905-681-5377
Product/Recommended Uses: For laboratory or industrial use only.

SECTION 2) HAZARDS IDENTIFICATION

Classification

Eye Irritation - Category 2A
Flammable Liquids - Category 2

Pictograms



Signal Word

Danger

Hazard Statements - Health

Causes serious eye irritation

Hazard Statements - Physical

Highly flammable liquid and vapor

Precautionary Statements - General

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Precautionary Statements - Prevention

Wash/Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating, lighting equipment.

Use only non-sparking tools.

Take action to prevent static discharges.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

In case of fire: Use carbon dioxide, alcohol foam, water spray or dry chemical to extinguish.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

Physical Hazards Not Otherwise Classified

No data available.

Health Hazards Not Otherwise Classified

No data available.

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0001569-01-3	1-PROPOXY-2-PROPANOL	100% - 100%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality or to reflect batch to batch variation.

SECTION 4) FIRST-AID MEASURES

4.2 Most important symptoms and effects, both acute and delayed

Inhalation

If product mist or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

Eye Contact

Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion.

Obtain medical attention immediately, preferably an ophthalmologist.

Remove contact lenses, if present and easy to do.

Skin Contact

Wash with soap and plenty of water. If skin irritation occurs: Get medical attention.

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Store contaminated clothing under water and wash before re-use or discard.

Ingestion

Rinse mouth with water if the victim is conscious. Remove dentures if present. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept lower than the waist so that vomit does not enter the lungs. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. If the victim is unconscious, place in the recovery position and get immediate medical attention. Immediately contact a poison control center or doctor. Seek medical attention if the victim feels unwell or if a large quantity of material has been ingested.

Most Important Symptoms and Effects, Both Acute and Delayed

Eyes: Causes serious eye irritation with inflammation, pain and tearing. May cause moderate corneal injury. Vapor can cause corneal injury.

Skin: Prolonged contact with unprotected skin may cause skin irritation with localized redness, itching and discomfort. May cause drying and cracking of the skin. Prolonged and repeated exposure to unprotected skin may cause skin irritation and possible burns.

Ingestion: May cause irritation of the gastrointestinal track with nausea, vomiting, abdominal pain and diarrhea. May cause depression of the central nervous system with anesthetic or narcotic effects.

Inhalation: Inhalation of mist or vapor may cause irritation of the upper respiratory tract. Symptoms may include central nervous system depression with anesthetic or narcotic effects.

Chronic: Persons with pre-existing skin disorders and respiratory impairment may be more susceptible to the effects of this substance. Prolonged or repeated skin contact may cause defatting of the skin and dermatitis.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use dry chemical, CO₂, water spray or alcohol resistant foam.

Use media appropriate for the surrounding fire.

Unsuitable Extinguishing Media

Do not use water jet.

Do not use straight stream of water.

Specific Hazards in Case of Fire

Flammable liquid and vapor. Vapors are heavier than air and can travel along the ground to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Closed containers may rupture due to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Closed containers may rupture due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention

Explosion hazards: Avoid sources of ignition, high temperatures and hot surfaces. Vapor may form an explosive mixture with air, especially in confined spaces.

Fire-fighting Procedures

Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. Water contaminated by this material must be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely. Stop spill/release if it can be done safely. Cool containers with flooding quantities of water until well after fire is out.

Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Special Protective Actions

Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

5.3 Advice for firefighters

Firefighters should wear NIOSH/MSHA approved self-contained, breathing apparatus and full protective clothing

Product will burn under fire conditions. Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Evacuate and isolate hazard area and keep unauthorized personnel away. A vapor-suppressing foam may be used to reduce vapors.

Recommended Equipment

Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA).

Personal Precautions

Flammable Liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Dike far ahead of liquid spill for later disposal.

Methods and Materials for Containment and Cleaning up

Cover drains and contain spill. Do not flush large spills down the drain. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material and place it in an approved container for proper disposal. Observe possible material restrictions. Clean contaminated area with soap and water. Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of material via a licensed waste disposal contractor.

Use clean, non-sparking tools to collect absorbed material. Ventilate area after clean-up is complete.

SECTION 7) HANDLING AND STORAGE

General

Wear all appropriate personal protective equipment specified in Section 8. NO SMOKING. Do not breathe vapor or mist. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes thoroughly after use.

Wash hands after use. Do not get in eyes, on skin or on clothing. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. Report ventilation failures immediately. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Store in a dry, well-ventilated area away from incompatible materials, food and drink. Keep away from heat and ignition sources. Transfer only to approved containers having correct labeling. Keep container tightly closed when not in use. Protect containers from physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers of this material are hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilated closed areas. Keep out of reach of children.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection

Wear safety glasses with side shields

An emergency eye wash must be readily accessible to the work area.

Wear indirect-vent, impact and splash resistant goggles when working with liquids

Skin Protection

Hand Protection: Wear gloves made of butyl rubber, polyethylene or those recommended by glove supplier for protection against materials in section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Skin protection: Wear protective clothing. Wear protective boots if the situation requires.

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOS(US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Showers, eyewash stations, and ventilation system.

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

Chemical Name	CANsmg	CANsppm	CANtmg	CANtppm	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)
No applicable chemical	-	-	-	-	-	-	-	-

Chemical Name	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH TLV Basis
No applicable chemical	-	-	-	-	-	-	-	-

Chemical Name	ACGIH Carcinogen	ACGIH Notations
No applicable chemical	-	-

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	8.35 lb/gal
Specific Gravity	0.09
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Appearance	clear, colorless liquid
Odor Description	Ethereal
Odor Threshold	N/A
pH	N/A
Melting/Freezing Point	-70 °C
Low Boiling Point	150 °C
High Boiling Point	N/A
Flash Point	48 °C
Vapor Pressure	2.5 @ 20°C mmHg
Vapor Density	4.0 (Air = 1)
Evaporation Rate	N/A
Upper Explosion Level	16.9% (v)
Lower Explosion Level	1.3% (v)
Water Solubility	Miscible
Coefficient Water/Oil	N/A
Viscosity	2.39 mPa*s @ 25°C

SECTION 10) STABILITY AND REACTIVITY

Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Stability

Stable under normal storage and handling conditions.

Conditions to Avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.2 Chemical Stability

Stable under normal storage and handling conditions.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Incompatible Materials

Strong acids, Strong bases, Strong oxidizing agents

Hazardous Decomposition Products

Thermal decomposition products include oxides of carbon, aldehydes, ketones, organic acids.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Route of Exposure

Inhalation, ingestion, skin absorption

Acute Toxicity

LD50 Oral: Rat < 2,159 mg/kg

LC50 Inhalation: Rat:8.34 mg/l, 4hr (No deaths occurred at this concentration)

LD50 Dermal: Rat > 3,818 mg/kg

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High concentrations cause irritation and CNS depression

Aspiration Hazard

No data available.

Carcinogenicity

This product contains no substances present at levels greater than or equal to the 0.1% threshold (de minimis) that are identified as a probable, possible, potential or confirmed carcinogens by ACGIH, IARC, NTP or OSHA.

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Serious Eye Damage/Irritation

Causes serious eye damage

Skin Corrosion/Irritation

Causes skin irritation

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Likely Routes of Exposure

Inhalation, Ingestion, Skin contact, Eye contact

Potential Health Effects - Miscellaneous

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May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury.

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Large discharges or spills of this material may be harmful to aquatic life and soil micro-organism

Fish: LC50 - *Oncorhynchus mykiss* (Rainbow trout), 96h > 100 mg/l

Aquatic invertebrates: EC50 - *Daphnia magna* (Water flea). 48h > 100 mg/l

Aquatic plants: EC50 - *Pseudokirchneriella subcapitata* (Green algae), 72h: 1,466 mg/l

Aquatic micro-organisms: EC50 - Bacteria, 16h: 3,800 mg/l

Mobility in Soil

Expected to have high mobility in soil

Bio-accumulative Potential

Low potential for bioaccumulation.

Persistence and Degradability

This product is readily biodegradeable.

Other Adverse Effects

Do not allow material to run into surface waters, wastewater or soil

Results of the PBT and vPvB assessment

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The substance is not PBT / vPvB

SECTION 13) DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste management should be in full compliance with federal, state and local laws.

Waste Disposal

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, provincial and local laws.

SECTION 14) TRANSPORT INFORMATION

Transport Canada Information

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials methods of shipping.

A flammable liquid with a flash point at or above 38°C (100°F) that does not meet the definition of any other hazard class may be reclassified as a combustible liquid. This provision does not apply to transportation by vessel or aircraft, except where other means of transportation are impracticable.

Limited quantity for flammable liquids Packing Group III when inner packaging are not over 5.0 liters (1.3 gallons) net capacity each, packed in a strong outer packaging

TDG Additional Information: May be shipped as a Limited Quantity according to packaging section 173.150.

UN Number: UN1993

Proper Shipping Name: Combustible liquid, N.O.S. (1-Propoxy-2-propanol)

Class: 3

Packing Group: III

NEAREG: Guide #128

Packaging Authorization: Non-Bulk: 49 CFR 173.203; Bulk: 173.241

Packaging Exceptions: 49 CFR 173.150

U.S. DOT Information

Ground Transportation - Bulk

UN Number: NA1993

Proper Shipping Name: Combustible liquid, N.O.S.(1-Propoxy-2-propanol)

Class: 3

Packing Group: III

NEAREG: Guide #128

Non-Bulk: 49 CFR 173.203; Bulk: 173.241

Packaging Exceptions: 49 CFR 173.150

IMDG Information

IMDG Additional Information: Consult the IMDG regulations for exceptions.

UN Number: NA1993

Proper Shipping Name: Flammable liquids, N.O.S.(1-Propoxy-2-propanol)

Class: 3

Packing Group: III

Marine Pollutant: No

EMS Number: F-E,S-E

IATA Information

ICAO/ IATA Additional Information: Refer to ICAO/IATA Packing instruction.

UN Number: UN1993

Proper Shipping Name: Flammable liquids, N.O.S.(1-Propoxy-2-propanol)

Class: 3

Packing Group: III

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0001569-01-3	1-PROPOXY-2-PROPANOL	100% - 100%	DSL,TSCA,EU_EC_Inventory

SECTION 16) OTHER INFORMATION**Glossary**

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CANsmg or CANspmm - Canadian Short Term Exposure Level in mg/L or in ppm; CANtmg or CANtppm - Canadian Time Weighted Average in mg/L or in ppm; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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