

**Glycol Ether TPM**

Revision Date 02/06/2018

SILVER FERN
CHEMICAL INC**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

Trade name : Glycol Ether TPM
CAS Number: : 25498-49-1
Chemical characterization : Propylene Glycol Ethers
Chemical name : (2-(2-Methoxy methyl ethoxy)Methylethoxy) Propanol
Synonyms : Propanol,(2(2-Methoxymethylethoxy)Methylethoxy),
Tripropylene Glycol Methyl Ether

Identified uses : Solvent

Company Address

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Company Telephone

Customer Service 866 282-3384
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Emergency telephone number

INFOTRAC USA and Canada 800-535-5053
All other countries 352-323-3500

2. HAZARDS IDENTIFICATION**GHS Classification**

Specific target organ systemic toxicity - single exposure Category 3

GHS Classification Scale (1= severe hazard; 4= slight hazard)

Label elements

Hazard symbols :



Signal word : Warning

Hazard Statements : H336 May cause drowsiness or dizziness.

Precautionary Statements : **Prevention**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.

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Response

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No additional information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Ingredients

Chemical name	CAS-No. EC-No.	Weight %	Component Type
Tripropylene Glycol Monomethyl Ether	25498-49-1	> 99.0 %	A

Key:

(A) Substance

4. FIRST AID MEASURES

General advice : Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician/doctor if necessary. Show this material safety data sheet to the doctor in attendance.

If inhaled : If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

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- In case of skin contact : Remove contaminated clothing as needed.
Wash skin thoroughly with mild soap and water.
Flush with lukewarm water for 15 minutes.
If sticky, use waterless cleaner first.
Seek medical attention if ill effect or irritation develops.
- In case of eye contact : Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.
- If swallowed : This material may be a slight health hazard if ingested in large quantities.
If large quantity swallowed, give lukewarm water (pint/ 1/2 liter) if victim completely conscious/alert.
Do not induce vomiting. Risk of damage to lungs exceeds poisoning risk.
Obtain emergency medical attention.
- Notes to physician**
- Symptoms : Inhalation may cause CNS depression.
- Hazards : May be harmful if swallowed and enters airways.
May be harmful if swallowed.
May cause drowsiness or dizziness.
- Treatment : Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : SMALL FIRE: Use dry chemical, CO₂, water spray or regular foam
LARGE FIRE: Use water spray, water fog or foam. DO NOT use straight streams
- Specific hazards during fire fighting : Heat from fire can generate flammable vapor.
When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined.
Vapors may be heavier than air.
May travel long distances along the ground before igniting and

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flashing back to vapor source.
Fine sprays/mists may be combustible at temperatures below normal flash point.
Heat may build enough pressure to rupture closed containers/spreading fire/increasing risk of burns/injuries.
Cool containers with flooding quantities of water until well after fire is out.
Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
Always stay away from tanks engulfed in fire.
For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Wear positive pressure self-contained breathing apparatus (SCBA).
Structural firefighter's protective clothing will only provide limited protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Clean-up to be performed only by trained and properly equipped personnel.

Environmental precautions : An authoritative evaluation of environmental exposure and risk indicates that no special risk management practices are needed to control environmental release.

Methods for containment /
Methods for cleaning up : Eliminate all sources of ignition.
All equipment used when handling this product must be grounded.
Do not touch or walk through spilled material.
Stop leak if you can do it without risk.
Prevent entry into waterways, sewers, basements or confined areas.
A vapor suppressing foam may be used to reduce vapors.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Use clean non-sparking tools to collect absorbed material.

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7. Handling and storage**Precautions for safe handling**

Advice on safe handling : Keep container tightly closed when not in use.
The potential for peroxide formation is enhanced when this solvent is used in processes such as distillation.
Use only non-sparking tools.
Properly ground containers before beginning transfer.
Handle empty containers with care.
Flammable/combustible residue remains after emptying.
The purging of all empty shipping containers, regardless of the flashpoint, is recommended when received with air atmospheres.
Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
Use adequate personal protective equipment.
Observe precautions pertaining to confined space entry.

Fire-fighting class : Not combustible.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store only in tightly closed, properly vented containers away from heat, sparks, open flame and strong oxidizing agents.
Store in properly lined steel/stainless steel to avoid slight discoloration from mild steel/copper.
Storage under nitrogen atmosphere is recommended to minimize possible formation of highly reactive peroxides.
Aluminum (5000 series alloys - U.S. Aluminum Association Standard) showed no corrosion after 30 days contact with PM Acetate, DPM, TPM, PTB, or PM at 71°C (160°F).
Some plastics/rubbers are attacked by Glycol Ethers/Ether Esters.
This product will absorb water if exposed to air.

Specific end use(s)

: See Section 1.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Ingredients with workplace control parameters**

Consult local authorities for acceptable exposure limits.

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Exposure controls

Engineering measures

Local exhaust in addition to general room ventilation may be required to meet exposure limit(s).

Personal protective equipment

- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
If exposure can exceed the occupational exposure limit(s), use approved respiratory protection equipment.
- Hand protection : Wear chemical resistant gloves such as:
Neoprene.
- Eye and face protection : Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.
- Skin and body protection : Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn.
Use PPE that is chemical resistant to the product and prevents skin contact.
- Hygiene measures : Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Use good personal hygiene practices.
Wash hands before eating, drinking, smoking, or using toilet facilities.
Take off contaminated clothing and wash before reuse.
Shower after work using plenty of soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : Colorless.
- Odor : Ether-like odor.
- Odor Threshold : No value available.
- Flash point : 124 °C
at 1,013 hPa (760 mm Hg)

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Method: PMCC

Lower explosion limit	: No Data Available.
Upper explosion limit	: No Data Available.
Flammability (solid, gas)	: Not applicable
Oxidizing properties	: Not considered an oxidizing agent.
Autoignition temperature	: 277 °C at 1,013 hPa
Molecular weight	: 206.28 g/mol
Decomposition temperature	: not determined
Melting point/freezing point	: -77.8 °C at 1,013 hPa
Boiling point/boiling range	: 242.85 °C at 1,013 hPa
Vapor pressure	: 0.017 hPa at 20 °C
Density	: 0.965 g/cm ³ at 20 °C
Water solubility	: Miscible
Partition coefficient: n-octanol/water	: log Pow: 0.31 at 20 °C
Viscosity, kinematic	: 5.53 mm ² /s at 25 °C (static)
Relative vapor density	: ~ 7.1 at 15 - 32 °C (Air = 1.0)
Surface tension	: 68.8 mN/m 1,000 mg/l at 20 °C
Evaporation rate	: < 1 (butyl acetate = 1)
Explosive properties	: Not explosive
Other Information	: Hygroscopic., Volatile Characteristics:, Negligible: <0.1%

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: Additional properties may be listed in Sections 2 and 5.

10. STABILITY AND REACTIVITY

- Reactivity : Will not occur.
- Chemical stability : Stable under recommended storage conditions.
- Hazardous reactions : Not expected to occur.
- Conditions to avoid : Extended contact with air or oxygen.
The potential for peroxide formation is enhanced when this solvent is used in processes such as distillation.
Heat, sparks, open flame, other ignition sources, and oxidizing conditions.
Ignition may occur at temperatures below those published in the literature as autoignition or ignition temperatures.
- Materials to avoid : Strong oxidizing agents.
Moisture and humidity.
May react with oxygen to form peroxides.
However, there is no known evidence that it has nearly the peroxide forming potential as, for example, diethyl ether, etc.
- Hazardous decomposition products : Not expected to decompose under normal conditions.
- Thermal decomposition : Incomplete combustion will form carbon monoxide and other toxic vapors.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute oral toxicity

Tripropylene Glycol :
Monomethyl Ether : Based on acute toxicity values, not classified.
Ingestion of very large amounts may cause CNS depression, respiratory failure, and death in cases of severe over-exposure.

LD50: 3,500 mg/kg
Species: Rat

Acute inhalation toxicity

Tripropylene Glycol :
Monomethyl Ether : Based on acute toxicity values, not classified.

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LC0: > 30 ppm
Exposure time: 8 HOURS
Species: Rat

Acute dermal toxicity

Tripropylene Glycol : Based on acute toxicity values, not classified.
Monomethyl Ether

LD50: 15,400 mg/kg
Species: Rabbit

Skin corrosion/irritation

: Not classified
Not a skin irritant.

Serious eye damage/eye irritation

: Not classified
Not an eye irritant.

Respiratory or skin sensitization

: Not classified
Not expected to be a sensitizer.

Chronic toxicity

Carcinogenicity : Not classified

Germ cell mutagenicity : Not classified

Reproductive toxicity

Effects on fertility / : Not classified

Effects on or via lactation : Not classified
Effects on Development

Aspiration hazard

: Not classified
May be harmful if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicology Assessment

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Acute aquatic toxicity : Based on acute aquatic toxicity values, not classified.
Chronic aquatic toxicity : Not classified, based on readily biodegradability and low acute toxicity.

Toxicity to fish :
Low acute toxicity to fish

Toxicity to daphnia and other aquatic invertebrates : Low acute toxicity to aquatic invertebrates.

Toxicity to algae : Low toxicity to algae.

Toxicity to bacteria : Low toxicity to sewage microbes.

Toxicity to fish (Chronic toxicity) : no data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : no data available

Persistence and degradability

Biodegradability : 60 %
Rapidly degradable.
(After 22 days in a ready biodegradability test)

Bioaccumulative potential

Bioaccumulation : Bioconcentration factor (BCF): 3.16
Method: (QSAR calculated value)
This material is not expected to bioaccumulate.

Mobility in soil

Surface tension : 68.8 mN/m
1,000mg/l
at 20 °C

Distribution among environmental compartments : Stability in water
no data available

: Stability in soil
no data available
Low absorption to soil particulates predicted

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Additional advice : No additional information available.
Environmental fate and pathways

Results of PBT and vPvB assessment

Not applicable.

Other adverse effects

Additional ecological information : No additional information available.

13. Disposal considerations

Waste treatment methods

Product : Do not dump into any sewers, on the ground, or into any body of water
Any disposal practice must be in compliance with all Federal, State/Provincial and local laws and regulations
Regulations may vary in different locations

14. TRANSPORT INFORMATION

Not regulated for transport

BLG (MARPOL Annex II)

Description of the goods : POLY(2-8)ALKYLENE GLYCOL MONOALKYL(C1-C6)ETHER (CONTAINS TRIPROPYLENE GLYCOL METHYL ETHER)

Pollution category : Z

Ship type : 3

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) Inventory: All substances in this product are listed and active on the TSCA inventory. This product is not subject to TSCA 12(b) Export Notification.

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

SARA 311/312

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SARA 311/312

Based upon available information, this material is classified as the following health and/ or physical hazards according to Section 311 & 312:

Health Hazards


Specific target organ systemic toxicity - single exposure


SARA 313

This product contains no known chemicals regulated under SARA 313.

State Reporting

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

 WARNING: This material may contain trace levels of the chemical Benzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

 WARNING: This material may contain trace levels of the chemical Benzene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

This product contains the following chemicals regulated by **Massachusetts' Right to Know Law**: Benzene, CAS No. 71-43-2

This product contains no known chemicals regulated by New Jersey's Worker and Community Right to Know Act.

This product contains no known chemicals regulated by Pennsylvania's Right to Know Act.

Other international regulations

Global Inventory Status

The ingredients of this product are compliant with the following chemical inventory requirements or exemptions.

*Additional Explanatory Status Statements follow the table, as necessary.

Country/Region	Inventory	Status Description
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
United States of America	TSCA	Listed and Active
Taiwan	TCSCA	Compliant

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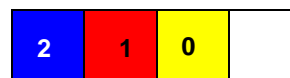
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16. OTHER INFORMATION

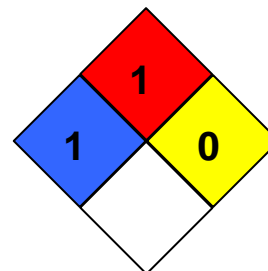
Material safety datasheet sections which have been updated:

Revised Section(s): 15 Revision Date February 1 2018

HMIS Classification : Health Hazard: 2
Flammability: 1
Physical hazards: 0



NFPA Classification : Health Hazard: 1
Fire Hazard: 1
Instability: 0



Further information

HMIS rating scale (0 = minimal hazard; 4 = severe hazard)

NFPA rating scale (0 = minimal hazard; 4 = severe hazard)

Disclaimer

Disclaimer

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

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