

Material Safety Data for: Glycol Ether TPM

1. PRODUCT IDENTIFICATION

Name	Tripropylene Glycol Methyl Ether
Synonyms	(2-(2-Methoxymethylethoxy)methylethoxy)propanol; TPM
CAS#	15498-49-1
Europe EC#	247-045-4
Product Uses	high boiling solvent for polymer-containing coatings and slow evaporating inks

2. INGREDIENTS

	%	TWAEV / TLV ppm / mg/m ³	LD ₅₀ ORAL	(mg/kg) SKIN	LC ₅₀ ppm INHALATION
Tripropylene Glycol Methyl Ether	100%	not listed	3200	15,440	not known

3. (a) HAZARDS SUMMARY

Hazards, Quick Guide:	<i>not hazardous</i>
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Canada – WHMIS

Key:

not controlled under WHMIS

B 2 – Flash Point <38°C, **B 3** – Flash Point >38°C & <93°C

D 1 – Immediately Toxic, **D 2** – Chronic Toxicity

C – Oxidising Substance, **E** – Corrosive

U.S.A. – HMIS

Key:

Health – 0, Fire – 1, Reactivity – 0

0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe

3. (b) HAZARDS – TOXICITY

Effects, Acute Exposure

Skin Contact	little to no effect
Skin Absorption	yes; no toxic effects likely by this route
Eye Contact	slightly irritating based on animal testing
Inhalation	not known – probably irritating above 100ppm – unobtainable concentration unless heated
Ingestion	not known – nausea, vomiting & diarrhoea expected in cases of substantial ingestion; <i>not a route of industrial exposure</i>

Effects, Chronic Exposure

General	prolonged & extensive exposure (10,000mg/kg/day for 90 days!) caused kidney damage in rabbits; <i>this level of exposure is unlikely to occur in industry</i>
Sensitising	not a sensitiser in humans or animals
Carcinogen/Tumorigen	not considered a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect in humans or animals
Mutagen	no known effect on humans or animals
Synergistic With	not known
LD ₅₀ (oral)	3180 – 5460mg/kg (rat) – 4 studies, 4835mg/kg (dog) – very old data (1911)
LD ₅₀ (skin)	15,440mg/kg (rabbit), >19,300mg/kg (rabbit)
LC ₅₀ (inhalation)	not known

Please ensure that this MSDS is given to, and explained to people using this product.

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4. FIRST AID

- SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.
- EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.
- INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If breathing stops, administer artificial respiration and seek medical aid promptly.
- INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. PHYSICAL PROPERTIES

Odour & Appearance	clear, colourless liquid with sweetish ether odour
Odour Threshold	not known
Vapour Pressure	0.017mmHg / 0.002kPa (25°C / 77°F)
Evaporation Rate (<i>Butyl Acetate = 1</i>)	0.0026
Vapour Density (air = 1)	7.1
Boiling Range	243°C / 470°F
Freezing Point	-60°C / -76°F
Specific Gravity	0.967 (20/20°C)
Water Solubility	complete
Also soluble in	most organic solvents
Viscosity	5.5centipoise (25°C / 77°F)
pH	none – (<i>does not liberate hydrogen ions when dissolved</i>)
Conversion Factor	1ppm = 8.42mg/m ³
Molecular Weight	206grams per mole

6. FLAMMABILITY & FIRE FIGHTING

Flash Point	>121°C / >250°F (closed cup)
Autoignition Temperature	270°C / 518°F
Flammable Limits	not known
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Fire Fighting Precautions	foam, dry chemical, water fog, water spray; fire fighters must wear SCBA
Static Charge Accumulation	cannot accumulate a static charge on agitation or pumping

7. STABILITY / REACTIVITY

Dangerously Reactive With	strong oxidising agents
Also Reactive With	strong acids, strong alkalis
Stability	stable (<i>forms peroxides on contact with air, but very slowly</i>); will not polymerize
Decomposes in Presence of	elevated temperature accelerates decomposition
Decomposition Products	apart from Hazardous Combustion Products, potentially explosive peroxides
Sensitive to Mechanical Impact	no

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8. PROTECTIVE EQUIPMENT / EXPOSURE CONTROL

ACGIH TLV	not listed
OSHA PEL	not listed
STEL	not listed
Hands	no special protective gloves required
Eyes	safety glasses with side shields – <i>always protect the eyes</i>
Clothing	no special protective clothing required

9. HANDLING & STORAGE

Store in a cool, dry environment, away from sources of ignition, heat and oxidising agents. Always ensure that containers, whether empty or full, or part full, are tightly sealed unless in use. Avoid breathing product vapour.

Never cut, drill, weld or grind on or near this container. Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower must be available near the workplace.

NOTE: As other ethers, this product may react with air to form explosive peroxides. The rate at which this might occur is very low, but if prolonged storage of part-drums is anticipated, flush headspace with dry nitrogen before sealing.

10. SPILL PROCEDURES

Leak Precaution	dyke to control spillage and prevent environmental contamination
Handling Spill	ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal

11. DISPOSAL

Waste Disposal	do not flush to sewer , recycle solvent if possible, if local regulations permit, may be put in sanitary landfill, may be incinerated in approved facility
Containers	Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. Pails must be vented and thoroughly dried prior to crushing and recycling. IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs). Steel containers must be inspected, pressure tested & recertified every 5 years. <i>Never cut, drill, weld or grind on or near this container, even if empty</i>

12. ENVIRONMENTAL INFORMATION

Bioaccumulation	this product is not a bioaccumulator
Biodegradation	this product biodegrades readily in the presence of oxygen; 52% biodegradation in 20 days, and 60% in 28 days
Abiotic Degradation	this product reacts with atmospheric hydroxyl radicals with a ½-life of 2.2 hours
Mobility in soil, water	this product is water soluble and will move readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 96hr)	11,620mg/litre (Pimephelas promelas)
EC ₅₀ (Crustacea, 48hr)	>10,000mg/litre (Daphnia magna)
EC ₅₀ (Bacteria, 48hr)	>10,000mg/litre (Salmonella typhimurium)
EC ₅₀ (Algae)	not available

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13. TRANSPORT REGULATIONS

Canada TDG	PIN	UN- not regulated for transport
AND	Shipping Name	not regulated for transport
U.S.A. 49 CFR	Class	not regulated for transport
	Packing Group	not regulated for transport
Marine Pollutant		not a marine pollutant

14. EMERGENCY INFORMATION

Canada	Call CANUTEC (collect)	(613) 996-6666
U.S.A.	Call CHEMTREC	(800) 424-9300

15. REGULATIONS

Canada DSL	on inventory
U.S.A. TSCA	on inventory
Europe EINECS	on inventory

This product may also be listed on the chemical inventories of other countries.

16. PREPARATION INFORMATION

Prepared for Megaloid Laboratories by Peter Bursztyn, (705) 734-1577

With data from RTECS, Haz. Substance Data Base, Cheminfo (CCOHS), IUCLID Datasheets (European Chem. Substance Info. System), & others, as available

*Preparation Date: **January 2004** Revision Date: **February 2007, February 2010***

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