



Comet Chemical Company Ltd.
3463 Thomas Street
Innisfill, ON, Canada, L9S 3W4
Telephone: (705) 436 5580

Glycol Ether TPM (Comsol TPM)

SDS Preparation Date (mm/dd/yyyy): 10/12/2016

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Glycol Ether TPM (Comsol TPM)**

Product Code(s) : None reported.

Recommended use of the chemical and restrictions on use

: Industrial solvent.
Use pattern: Professional use only
Restriction on use: None known

Chemical family : aliphatic glycol ether

Name, address, and telephone number of the supplier:

Comet Chemical Company Ltd.

3463 Thomas Street
Innisfill, ON, Canada
L9S 3W4

Supplier's Telephone # : 705-436-5580

24 Hr. Emergency Tel # : TERRRAPURE ENVIRONMENTAL : 800-567-7455

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear colourless liquid. Ether like odour.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Serious eye damage/eye irritation - Category 2A

Label elements

Hazard pictogram(s)



Signal Word

WARNING!

Hazard statement(s)

Causes serious eye irritation.

Precautionary statement(s)

Wash hands and face thoroughly after handling.
Wear protective gloves and eye/face protection.

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.



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Other hazards

Other hazards which do not result in classification :

Ingestion may cause irritation of the mouth, throat and stomach. May cause mild skin irritation.

Environmental precautions:

Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Tripropylene glycol monomethyl ether	Tripropylene glycol methyl ether; TPM	25498-49-1	100.00

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do not induce vomiting. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.
- Inhalation* : If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Call a POISON CENTER or doctor/physician if you feel unwell.
- Skin contact* : Wash affected areas with soap and water. Take off contaminated clothing and wash before re-use. Get medical attention if irritation develops and persists.
- Eye contact* : Flush with large amounts of water for 15 minutes. Remove contact lenses, if present and easy to do. If irritation or symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed

- : Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct skin contact may cause temporary redness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Inhalation of high concentrations may cause dizziness, disorientation, incoordination, narcosis, nausea or narcotic effects.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

- : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. May form explosive peroxides. Rate of peroxide formation is not known.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Carbon dioxide and carbon monoxide.

Special protective equipment and precautions for firefighters



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Protective equipment for fire-fighters

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn.

Special fire-fighting procedures

- : Evacuate personnel to safe areas. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Dike for water control. Avoid release to the environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up

- : Ventilate the area. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.

Special spill response procedures

- : In case of transportation accident, contact TERRAPURE ENVIRONMENTAL at 1-800-567-7455.
US CERCLA Reportable quantity (RQ): None.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Wear protective gloves and eye/face protection. Avoid breathing mist or vapours. Avoid contact with skin, eyes and clothing. Keep away from heat and flame. Take precautionary measures against static discharge. Ground all equipment during handling. Use non-sparking tools. Label containers appropriately. Wash thoroughly after handling. Avoid contact during pregnancy/while nursing. Keep containers closed when not in use.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Incompatible materials : Strong oxidizers (e.g. Chlorine, Peroxides, etc.); Strong acids

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:			
<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u> <u>STEL</u>
Tripropylene glycol monomethyl ether	N/Av	N/Av	N/Av N/Av

Exposure controls

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Ventilation and engineering measures

: Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below their respective threshold limit value. Use explosion-proof electrical and ventilating equipment.

Respiratory protection : Respiratory protection is required if the concentrations exceed the TLV. Use a NIOSH approved dust respirator if dust levels exceed exposure limits. Seek advice from respiratory protection specialists.

Skin protection : Wear protective gloves. Advice should be sought from glove suppliers.

Eye / face protection : Wear eye/face protection. Safety glasses with side-shields or chemical splash goggles.

Other protective equipment : Wear appropriate protective clothing to prevent skin contact, such as coveralls or long sleeved shirt, long pants, and shoes and socks. Wear protective gloves. An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Avoid breathing mist or vapours. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear colourless liquid.

Odour : Ether like odour.

Odour threshold : Not available.

pH : No information available.

Melting/Freezing point : -60°C

Initial boiling point and boiling range

: 242°C

Flash point : 121°C

Flashpoint (Method) : closed cup

Evaporation rate (BuAe = 1) : Not available.

Flammability (solid, gas) : Not applicable.

Lower flammable limit (% by vol.)

: Not available.

Upper flammable limit (% by vol.)

: Not available.

Oxidizing properties : None known.

Explosive properties : Not explosive

Vapour pressure : 0.02 mmHg

Vapour density : 7.1(Air = 1)

Relative density / Specific gravity

: 0.96

Solubility in water : Soluble

Other solubility(ies) : Soluble in most organic solvents.

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: 0.3

Auto-ignition temperature : Not available.

Decomposition temperature : No information available.

Viscosity : Not available.

Volatiles (% by weight) : No information available.

Volatile organic Compounds (VOC's)

: No information available.

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Absolute pressure of container

: N/Ap

Flame projection length

: N/Ap

Other physical/chemical comments

: None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under normal conditions. Material is hygroscopic and may absorb moisture from air.

Possibility of hazardous reactions

: Hazardous polymerization does not occur.

Conditions to avoid

: Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Exposure to moisture.

Incompatible materials

: See Section 7 (Handling and Storage) for further details.

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption

: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Sign and symptoms ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

: May cause mild skin irritation.

Sign and symptoms eyes

: Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision.

Potential Chronic Health Effects

: Prolonged exposure may cause CNS (Central Nervous System) effects including dizziness, drowsiness and incoordination.

Mutagenicity

: Not expected to be mutagenic in humans.

Carcinogenicity

: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive effects.

Sensitization to material

: Not expected to be a skin or respiratory sensitizer.

Specific target organ effects

: This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

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Medical conditions aggravated by overexposure

: None known or reported by the manufacturer.

Synergistic materials

: No information available.

Toxicological data

: See below for toxicological data on the substance.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u> <u>inh, rat</u>	<u>LD₅₀</u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Tripropylene glycol monomethyl ether	> 200 mg/L/1H (aerosol)	3100 - 3900 mg/kg	15 440 mg/kg

Other important toxicological hazards

: See Section 3 for additional information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: Not expected to be harmful to aquatic organisms. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC₅₀ / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Tripropylene glycol monomethyl ether	25498-49-1	11 619 mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Daphnia</u>		
		<u>EC₅₀ / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Tripropylene glycol monomethyl ether	25498-49-1	> 10 000 mg/L (Daphnia magna)	N/Av	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Algae</u>		
		<u>EC₅₀ / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Tripropylene glycol monomethyl ether	25498-49-1	21 010 mg/L/96hr (Green algae)	N/Av	None.

Persistence and degradability

: Readily biodegradable.

Bioaccumulation potential

: No data is available on the product itself.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log K_{ow})</u>	<u>Bioconcentration factor (BCF)</u>
Tripropylene glycol monomethyl ether (CAS 25498-49-1)	0.309	3.16

Mobility in soil

: High water solubility indicates a high mobility in soil.

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Other Adverse Environmental effects





: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS
Handling for Disposal : Handle waste according to recommendations in Section 7. Empty containers may contain hazardous residues.

Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	None.	Not regulated.	not regulated	none	
TDG Additional information	None.				
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information	None.				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information	None.				

Special precautions for user : Keep away from flames and hot surfaces. - No smoking.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: This information is not available.



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SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	de minimus Concentration
Trippropylene glycol monomethyl ether	25498-49-1	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Chronic Health Hazard Fire Hazard . Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Trippropylene glycol monomethyl ether	25498-49-1	No	N/Ap	No	No	No	No	No	No

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Trippropylene glycol monomethyl ether	25498-49-1	247-045-4	Present	Present	(7)-97; (2)-438; (2)-348	KE-23313	Present	May be used as a single component chemical under an appropriate group standard.

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

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of 1980
CFR: Code of Federal Regulations
CNS: Central Nervous System
DOT: Department of Transportation
EPA: Environmental Protection Agency
EINECS: European Inventory of Existing Commercial chemical Substances
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016
2. International Agency for Research on Cancer Monographs, searched 2016
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2016(Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - 2016 version.
6. California Proposition 65 List - 2016 version.
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2016.

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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p><u>Prepared for:</u> Comet Chemical Company Ltd. 3463 Thomas Street Innisfill, ON L9S 3W4 Information (M-F 8:00-5:00): 705-436-5580 www.cometchemical.com</p>	 <p>COMET COMET CHEMICAL COMPANY LTD.</p>
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DISCLAIMER

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