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1. PRODUCT IDENTIFICATION

Name: *Glycol Ether PM*

Synonyms: *1-methoxy-2-propanol; 1-methoxy-2-hydroxypropane, propylene glycol monomethyl ether, PM, PGME*


CAS# 107-98-2

Product Uses: *solvent in coatings, cleaners, lubricants*

Supplier Identifier: *Megaloid Laboratories Limited
5515 North Service Road, Suite 306
Burlington, Ontario, Canada
L7L 6G4
Phone: 905-337-7411 / Fax: 905-337-1686*

EMERGENCY INFORMATION Call CHEMTREC - (800) 424-9300 (CCN # 693764)

2. HAZARDS

GHS Class <i>(category)</i>	Flammable <i>(3)</i>	STOT <i>(3)</i>	 Label Pictograms
Signal Word	WARNING		
Hazard Statements	<i>flammable liquid & vapour (H226)</i>	<i>May cause dizziness or drowsiness (H336)</i>	

GHS Precautionary Statements for Labelling

Prevention

- P210** Keep away from heat, sparks, open flames and hot surfaces. No smoking.
- P233** Keep container tightly closed.
- P240** Ground or bond container and receiving equipment.
- P241** Use explosion-proof electrical, ventilating and lighting equipment.
- P242** Use only non-sparking tools.
- P243** Take precautionary measures against static discharge.
- P261** Avoid breathing vapours.
- P280** Wear eye protection, protective gloves and clothing of butyl rubber

Response	
P304, P340	IF INHALED: remove person to fresh air and keep comfortable for breathing.
P370, P378	IN CASE OF FIRE: use alcohol-resistant foam to extinguish.
Storage	
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
Disposal	
P501	Dispose of contents and container in accordance with local, regional, national and international regulations.

3. COMPOSITION

Chemical Name:	CAS No.	%	Other Identifiers
1-Methoxy-2-Propanol	107-98-2	100	EC # 203-539-1

4. FIRST AID

Inhalation

Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.**

Skin Contact

Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.

Eye Contact

Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.

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.

First-aid Comments

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. FIRE FIGHTING & FLAMMABILITY

Extinguishing Media

Suitable Extinguishing Media

Alcohol-resistant foam, water spray or fog. Dry chemical powder, Carbon dioxide, sand or earth may be used for small fires only.

Combustion Products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Firefighters must wear SCBA. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

Static Charge Accumulation

Probably cannot accumulate a static charge on agitation or pumping; glycol ethers have sufficiently high electrical conductivity to prevent static accumulation

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before re-entering area. Ground and bond all containers and handling equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Use appropriate safety equipment.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

Methods and Materials for Containment and Cleaning Up

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.

Other Information

Report spills to local health, safety and environmental authorities, as required.

7. HANDLING & STORAGE

Precautions for Safe Handling

Use non-sparking bronze or aluminium hand tools. Electrical & mechanical equipment (lighting, switchgear, forklift trucks) used with or around this product should be explosion-proof. It is prudent to ground or electrically bond the source container, receiving container and transfer pump before transferring contents. Avoid splashing; keep the product nozzle below the surface in the receiving container.

Some glycol ethers may react with oxygen in the air to form explosive or flammable peroxides. Ensure that containers are full and tightly sealed. If prolonged storage of a part container is anticipated, flush headspace with dry nitrogen gas prior to sealing. Empty containers may contain a flammable or explosive vapour. Always ensure that containers, whether empty or full, are tightly sealed unless in use.

Avoid creating or breathing product vapour. If vapour forms in use, install adequate ventilation. If dealing with a spill, and ventilation is impossible or impractical, wear a suitable respirator with organic vapour cartridge.

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

Conditions for Safe Storage

Store & use in a cool, dry environment, away from sources of ignition, heat & oxidising agents.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWAEV 100ppm / 368mg/m³
 ACGIH TLV 50ppm / 184mg/m³
 OSHA PEL not listed

Ontario STEV 150ppm / 552mg/m³
 ACGIH STEL 100ppm / 368mg/m³
 OSHA STEL not listed

Ventilation	<i>mechanical exhaust ventilation may be required to control airborne titre to regulated limits</i>
Hands	<i>no special protective gloves required; butyl rubber gloves may be used – other types may also protect; consult supplier to confirm suitability</i>
Eyes	<i>Safety glasses with side shields – always protect the eyes</i>
Clothing	<i>No special protective clothing required</i>

9. PHYSICAL PROPERTIES

Appearance	<i>Clear colourless, hygroscopic liquid.</i>
Odour	<i>mild pleasant ether odour</i>
Odour threshold	<i>10ppm</i>
pH	<i>none – (does not liberate hydrogen ions when dissolved)</i>
Melting Point/Freezing Point	<i>-142°C / -223°F, -95 °C (-139 °F) – additional reports</i>
Initial Boiling Point/Range	<i>119°C / 246°F</i>
Flash Point	<i>32°C / 90°F (closed cup)</i>
Evaporation Rate	<i>0.8 (Butyl Acetate =1)</i>
Flammability (Solid, Gas)	<i>Not Available</i>
Upper/Lower Flammability or Explosive Limit	<i>1.6% – 13.8%</i>
Vapour Pressure	<i>12.5mmHg / 1.67kPa (25°C / 77°F)</i>
Vapour Density (air = 1)	<i>3.1</i>
Specific Gravity	<i>0.918 (20/20°C)</i>
Water Solubility	<i>complete, Also soluble in most organic solvents.</i>
Partition Coefficient, n-Octanol/Water (Log Kow)	<i>0.49</i>
Auto-ignition Temperature	<i>290°C / 554°F</i>
Conversion Factor	<i>1ppm = 3.68mg/m³</i>
Viscosity	<i>1.7 centipoise (20°C / 68°F)</i>

Physical State	<i>Liquid</i>
Molecular Weight	<i>90 grams per mole</i>
Molecular Formula	<i>C4-H10-O2</i>

10. REACTIVITY

Dangerously Reactive *with strong oxidising agents; strong acids; reacts with alkali metals, alkaline earth metals, & metal hydrides, to release hydrogen gas & alkali*

Also Reactive *with halogens & halogenating agents; aldehydes; may corrode aluminium*

Chemical Stability

Stable; will not polymerize

Decomposes in Presence of oxygen – many Glycol Ethers form explosive peroxides on prolonged contact with air

Decomposition Products

Explosive peroxides

Mechanical Impact

Not sensitive

11. TOXICITY

Acute Toxicity	
LD₅₀ (oral)	<i>4010-7510mg/kg (rat), 5000mg/kg (dog), 10,800 & 11,700mg/kg (mouse), 5300 & 5700mg/kg (rabbit)</i>
LD₅₀ (skin)	<i>11,000-13,755 & 14,100mg/kg (rabbit) – several studies</i>
LC₅₀ (inhalation)	<i>10,000ppm (rat), 15,000ppm (rabbit & guinea pig)</i>

Skin Corrosion/Irritation

Little to no effect

Serious Eye Damage/Irritation

Vapour begins to irritate above 250ppm; severely irritating at 700ppm

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

objectionable at 50-75ppm; irritating above 250ppm; at 300-400ppm central nervous depression seen, including headache, dizziness, drowsiness, poor co-ordination

Skin Absorption

yes; total body immersion apart, no toxic effects likely by this route

Ingestion

not known, central depression as for inhalation – not a route of industrial exposure

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Prolonged exposure may cause dermatitis, although no cases have been reported.

Respiratory and/or Skin Sensitization

not a sensitizer in humans or animals

Carcinogenicity

not considered a tumorigen or a carcinogen in humans or animals

Reproductive Toxicity

Sexual Function and Fertility

no known effect in humans; equivocal evidence for neurological effects in rodents at doses not causing maternal effects

Germ Cell Mutagenicity

no known effect on humans or animals

12. ECOLOGICAL INFORMATION

Bioaccumulation	<i>rapidly eliminated from living organisms; not a bioaccumulator; biological ½-life is ~2.5 hours</i>
Persistence and Degradability	Biodegradation - <i>biodegrades rapidly in the presence of oxygen; 58% in 20 days, ~90% in 29 days, 96% in 28 days</i> Abiotic Degradation - <i>reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 3.1hr & 21hr</i>
Mobility in soil, water	<i>water soluble; moves readily in soil & water</i>
Aquatic Toxicity	
LC50 (Fish, 96hr)	<i>4600-10,000mg/litre (Leuciscus idus), 20,800mg/litre (Pimephales promelas)</i>
EC50 (Crustacea, 48hr)	<i>23,300mg/kg (Daphnia magna), 2954mg/kg (Acartia tonsa)</i>
EC50 (Algae)	<i>>1000mg/litre (Pseudokirchnerella subcapitata), 6745 & 8578mg/litre (Skeletonema costatum)</i>
EC50 (Bacteria)	<i>>1000mg/litre (activated sludge), >5000 & >6500mg/litre (Salmonella typhimurium) – no effect seen</i>

13. DISPOSAL

Water Disposal

Do not flush to sewer, recycle solvent if possible, 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.

Never cut, drill, weld or grind on or near this container, even if empty.

14. TRANSPORT CLASSIFICATION

Canada TDG	PIN	UN3092	
AND	Shipping Name	1-methoxy-2-propanol	
U.S.A. 49 CFR	Class & Packing Group	3, PG III	

Marine Pollutant	Not a Marine Pollutant	
ERAP Required	NO	
Reportable Quantity	NO	
E R G No.	129	

15. REGULATIONS

Canada DSL	On Inventory
U.S.A. TSCA	On Inventory
Europe EINECS	On Inventory

Canadian Regulations

CEPA - National Pollutant Release Inventory (NPRI)

Not specifically listed.

U.S.A. Regulations

NIOSH Recommendations: Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 100 ppm (360 mg/cu m). Recommended Exposure Limit: 15 Min Short-Term Exposure Limit: 150 ppm (540 mg/cu m).

Threshold Limit Values: 8 hr Time Weighted Avg (TWA): 100 ppm; 15 min Short Term Exposure Limit (STEL): 150 ppm.

TSCA Requirements: Pursuant to section 8(d) of TSCA, EPA promulgated a model Health and Safety Data Reporting Rule. The section 8(d) model rule requires manufacturers, importers, and processors of listed chemical substances and mixtures to submit to EPA copies and lists of unpublished health and safety studies. 1-Methoxy-2-propanol is included on this list.

OSHA Hazards: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Fire Hazard

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

Pennsylvania Right To Know

1-Methoxypropane-2-ol 107-98-2

New Jersey Right To Know

1-Methoxypropane-2-ol 107-98-2

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

International Inventories

The components of this product are reported in the following inventories:

AICS:	Listed
IECSC:	Listed
ENCS:	Listed
KECI:	Listed

NZIoC: Listed
 PICCS: Listed
 CH INV: Listed

16. OTHER INFORMATION

NFPA RATING	Health 1	Flammability 3	Instability 0
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Prepared for Megaloid Laboratories Limited by Richard Koscher
 Preparation Date: December 2003
 Revision Dates: Dec 2006, Nov 2009, Nov 2012, May 2015, March 2018, Jan 2019

Key to Abbreviations	<p>ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances</p>
References	<p>CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).</p>
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