



## Safety Data Sheet

### 1. PRODUCT IDENTIFICATION

Name	<b>Glycol Ether DPM</b>
Synonyms	dipropylene glycol (mono) methyl ether; 1-(2-methoxy-1-methylethoxy)-2-propanol; 1-(2-methoxyisopropoxy)-2-propanol; glycol ether DPM; DPGME
CAS#	34590-94-8
Europe EC#	252-104-2
Product Uses	solvent in coatings & cleaners; heat transfer fluid, <i>low toxicity substitute for glycol ether DM</i>

### 2. HAZARDS

**Quick Guide:** combustible liquid

#### Canada – WHMIS

Key:

#### B 3

**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, **F** – Reactive Substance

#### U.S.A. – HMIS

Key:

#### Health – 0/1, Fire – 2, Reactivity – 0

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

### 3. COMPOSITION

	%	TWAEV / TLV mg/m <sup>3</sup>	LD <sub>50</sub> (mg/kg) ORAL	LD <sub>50</sub> (mg/kg) SKIN	LC <sub>50</sub> ppm INHALATION
dipropylene glycol monomethyl ether	100%	100 (skin)	5130	>13,000	above 500

### 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. FIRE FIGHTING & FLAMMABILITY

Flash Point	85°C / 185°F (closed cup)
Autoignition Temperature	270°C / 518°F
Flammable Limits	1.1% – 3.0%
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Fire Fighting	alcohol or polymer foam, dry chemical, water fog or spray; fire fighters must wear SCBA
Static Charge Accumulation	cannot accumulate a static charge on agitation or pumping

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**6. ACCIDENTAL RELEASE MEASURES**

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, shovel & store in closed containers for recycling or disposal

**7. HANDLING & STORAGE**

Store in a cool, dry environment, away from sources of ignition and oxidising agents.

This product may react with oxygen in the air to form explosive or flammable peroxides. The rate of any such reaction is likely to be slow and cause no problems in normal use. However distillation tends to concentrate any peroxides which may have formed. Never distil to dryness, as this may cause an explosion. If prolonged storage is anticipated, ensure that containers are full and tightly sealed.

Avoid breathing product vapour. Use with adequate ventilation. 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.

**8. EXPOSURE CONTROL & PERSONAL PROTECTION**

Ontario TWAEV	100ppm / 605mg/m <sup>3</sup>
ACGIH TLV	100ppm / 606mg/m <sup>3</sup> (skin)
OSHA PEL	100ppm / 600mg/m <sup>3</sup> (skin)
OSHA STEL	150ppm / 900mg/m <sup>3</sup>
Ventilation	no special ventilation required
Hands	no special protective gloves required – butyl gloves are likely to be resistant
Eyes	safety glasses with side shields – <i>always protect the eyes</i>
Clothing	no special protective clothing required

**9. PHYSICAL PROPERTIES**

Odour & Appearance	clear, colourless liquid with mild ether odour & a bitter taste
Odour Threshold	35ppm
Vapour Pressure	0.38mmHg / 0.05kPa (25°C / 77°F)
Evaporation Rate ( <i>Butyl Acetate = 1</i> )	0.02
Vapour Density (air = 1)	5.1
Boiling Range	190°C / 374°F
Freezing Point	-83°C / -117°F
Specific Gravity	0.95 (20/20°C)
Water Solubility	complete
Also soluble in	most organic solvents
Viscosity	3.5centipoise (25°C / 77°F)
pH	none – ( <i>does not liberate hydrogen ions when dissolved</i> )
Conversion Factor	1ppm = 6.05mg/m <sup>3</sup>
Molecular Weight	148grams per mole

**10. REACTIVITY**

Dangerously Reactive With	strong oxidising agents
Also Reactive With	not known
Stability	stable; will not polymerize
Decomposes in Presence of	oxygen plus ultraviolet light
Decomposition Products	apart from Hazardous Combustion Products; explosive peroxides may form
Sensitive to Mechanical Impact	no

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## 11. TOXICITY

### Effects, Acute Exposure

Skin Contact	little or no effect
Skin Absorption	yes; no toxic effects likely by this route
Eye Contact	slight & temporary irritation
Inhalation	irritating above 75ppm but low vapour pressure makes this unlikely; mists of 1000ppm cause
Ingestion	headache, dizziness, intoxication, drowsiness, but >100ppm " <i>would not be tolerated willingly</i> " not known, low toxicity – <i>not a route of industrial exposure</i>

### Effects, Chronic Exposure

General	none known
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 <sub>50</sub> (oral)	5130 & 5225mg/kg (rat), 7130mg/kg (dog)
LD <sub>50</sub> (skin)	13,000-14,000 & >19,080mg/kg (rabbit)
LC <sub>50</sub> (inhalation)	above 500ppm ( <i>no mortality</i> )

## 12. ECOLOGICAL INFORMATION

Bioaccumulation	not a bioaccumulator due to high water solubility and rapid rate of elimination/metabolism
Biodegradation	degrades readily in the presence of oxygen; various rates reported from 93% in 13d to 34% in 28d (in sewage sludge)
Abiotic Degradation	direct photolysis is reported to cause destruction with a ½-life of 3-4 hours
Mobility in soil, water	water soluble; moves readily in soil and water
<b>Aquatic Toxicity</b>	
LC <sub>50</sub> (Fish, 96hr)	10,000mg/litre (Pimephales promelas),
LC <sub>50</sub> (Crustacea, 48hr)	above 1000mg/litre (Crangon crangon, 96hr), 1920mg/litre (Daphnia magna)
EC <sub>50</sub> (Algæ)	no data available
EC <sub>10</sub> (Bacteria)	4168mg/litre (Pseudomonas putida) – <i>this is an EC<sub>10</sub> not an EC<sub>50</sub></i>

## 13. DISPOSAL

Waste Disposal	<b>do not flush to sewer</b> , recycle solvent if possible, may be incinerated in approved facility
Containers	<b>Drums</b> should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. <b>Pails</b> must be vented and thoroughly dried prior to crushing and recycling. <b>IBCs</b> (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. <b><i>Never cut, drill, weld or grind on or near this container, even if empty</i></b>

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**14. TRANSPORT CLASSIFICATION**

<b>Canada TDG</b>	<b>PIN</b>	<b>UN – not regulated for transport</b>
	<b>Shipping Name</b>	<b>not regulated for transport</b>
	<b>Class &amp; Packing Group</b>	<b>not regulated for transport</b>
<b>U.S.A. 49 CFR</b>	<b>PIN</b>	<b>NA-1993</b>
	<b>Shipping Name</b>	<b>COMBUSTIBLE LIQUIDS N.O.S. (dipropylene glycol methyl ether)</b>
	<b>Class &amp; Packing Group</b>	<b>3, combustible</b>
<b>Marine Pollutant</b>		<b>not a marine pollutant</b>
<b>ERAP Required</b>		<b>NO</b>

**EMERGENCY INFORMATION**

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

**15. REGULATIONS**

<b>Canada DSL</b>	<b>on inventory</b>
<b>U.S.A. TSCA</b>	<b>on inventory</b>
<b>Europe EINECS</b>	<b>on inventory</b>

**Immediately Dangerous to Life or Health:** 600 ppm

**Allowable Tolerances:** Dipropylene glycol monomethyl ether is exempted from the requirement of a tolerance when used as a stabilizer in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops only. Dipropylene glycol monomethyl ether is exempted from the requirement of a tolerance when used as a surfactant or a related adjuvant of a surfactant in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals.

**OSHA Standards:** Permissible Exposure Limit: Table Z-1 8-hr Time-Weighted Avg: 100 ppm (600 mg/cu m); Skin Designation. Vacated 1989 OSHA PEL TWA 100 ppm (600 mg/cu m); STEL 150 ppm (900 mg/cu m), skin designation, is still enforced in some states.

**NIOSH Recommendations:** Recommended Exposure Limit: 10 Hr Time-Weighted avg: 100 ppm (600 mg/cu m); skin. Recommended Exposure Limit: 15 Min Short-Term Exposure Limit: 150 ppm (900 mg/cu m); skin.

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

**FIFRA Requirements:** Dipropylene glycol monomethyl ether is exempted from the requirement of a tolerance when used as a stabilizer in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops only. Dipropylene glycol monomethyl ether is exempted from the requirement of a tolerance when used as a surfactant or a related adjuvant of a surfactant in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals.

**FDA Requirements:** Dipropylene glycol monomethyl ether is an indirect food additive for use only as a component of adhesives.

**16. OTHER INFORMATION**

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

*Data from RTECS, HSDB (Haz. Substance Data Base), Cheminfo (CCOHS), IUCLID Datasheets (ESIS – European Chem. Substance Info. System), & others.*

*Preparation Date: June 2006      Revision Date: June 2009, June 2012*

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