

SAFETY DATA SHEET



Glycol Ether DPM

Version	Revision Date:	SDS Number:	Date of last issue: 2023-08-22
1.8	2024-08-30	BE640	Date of first issue: 2014-07-23

1. PRODUCT AND COMPANY IDENTIFICATION

Trade name	: Glycol Ether DPM
CAS Number:	: 34590-94-8
Chemical characterization	: Propylene Glycol Ethers
Chemical name	: Dipropylene Glycol Monomethyl Ether
Synonyms	: DPM, Dipropylene Glycol Methyl Ether, DPGME
Identified uses	: Solvent

The manufacturer, importer or supplier's name, address and telephone number

Company Address

LyondellBasell Taiwan Co., Ltd.
7F-6, #101, Fu Hsiung North Road, Taipei,
Taiwan

Company Telephone

(Tel) 02-7707-9000
(Fax) 02-8770-1122
product.safety@lyb.com

Emergency telephone number

(86) 158 2162 0640 China

E-mail address	: product.safety@lyb.com
Responsible/issuing person	

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	: Category 4
Specific target organ toxicity - single exposure	: Category 3 (Respiratory system)
Aspiration hazard	: Category 2

GHS label elements

Hazard pictograms



Signal word	: Warning
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Hazard Statements	: H227 Combustible liquid. H305 May be harmful if swallowed and enters airways.
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H335 May cause respiratory irritation.

Precautionary Statements

:

Prevention:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
No smoking.
P261 Avoid breathing mist or vapours.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P331 Do NOT induce vomiting.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

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

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Substance
Substance name	:	Dipropylene Glycol Monomethyl Ether
CAS-No.	:	252-104-2 (EINECS)

Components

Chemical name	CAS-No.	Concentration (% w/w)
Dipropylene Glycol Monomethyl Ether	34590-94-8	> 99

4. FIRST AID MEASURES

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

If inhaled	: Remove to fresh air. Keep patient warm and at rest. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
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 discomfort persists.
In case of eye contact	: Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation persists, consult a specialist.
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.
Most important symptoms and effects, both acute and delayed	: Nasal irritation Respiratory irritation May cause respiratory irritation. May be harmful if swallowed and enters airways.
Notes to physician	: 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 regular foam. Do not use straight streams.
Unsuitable extinguishing media	: Do not use solid water stream.
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. Flammable vapors may be heavier than air and travel long distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be combustible at temperatures below normal flash point.

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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.
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.
Move containers from fire area if it can be done without risk.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Specific extinguishing methods	: Cool containers with flooding quantities of water until well after fire is out.
Special protective equipment for fire-fighters	: Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear. Structural firefighter's protective clothing will only provide limited protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Eliminate all sources of ignition. Clean-up to be performed only by trained and properly equipped personnel. Keep non-involved personnel away from the area of spillage. See section 8 for additional PPE information. See section 13 for disposal information.
Methods and materials for containment and 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.

7. HANDLING AND STORAGE

Technical measures	: Ensure that eyewash stations and safety showers are close to the workstation location.
Local/Total ventilation	: Ensure adequate ventilation.

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- 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.
When transferring propylene glycol ethers with flash points at or below 60 °C (140 °F) into fixed site vessels, the vessel should be purged and inerted prior to transfer.
Propylene glycol ethers may be transferred into air atmospheres if the temperature of the product and the ambient temperature within the shipping container are both at least 16.7 °C (30 °F) less than the product's flash point. After loading, nitrogen blanketing is required if the contents of the transportation container could exceed a temperature of 16.7 °C (30 °F) less than the product flash point during any subsequent transportation activities.
If the product flash point is less than 16.7 °C (30 °F) above either the ambient temperature of the transportation container or the storage temperature of the product, the container should be purged and inerted with nitrogen prior to loading and nitrogen blanketed after loading.
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.
- Conditions for safe storage : Store only in tightly closed, properly vented containers away from heat, sparks, open flame and strong oxidizing agents.
Storage under nitrogen atmosphere is recommended to minimize potential for moisture condensation in the vapor space, and the formation of peroxides.
Store in properly lined steel/stainless steel to avoid slight discoloration from mild steel/copper.
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.
- Materials to avoid : Carbon steel
Store in properly lined steel/stainless steel to avoid slight discoloration from mild steel/copper.
Some plastics/rubbers are attacked by Glycol Ethers/Ether Esters.

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Further information on storage stability : Stable under recommended storage conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dipropylene Glycol Monomethyl Ether	34590-94-8	TWA	100 ppm 606 mg/m ³	OEL (TW)
		STEL	125 ppm 757.5 mg/m ³	OEL (TW)

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

Personal protective equipment

Hand protection

Remarks : Wear chemical resistant gloves such as: Neoprene.

Eye protection : Use splash goggles when eye contact due to splashing or spraying liquid is possible.

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.

Protective measures : Wear suitable protective equipment.

Hygiene measures : 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.
Use care in walking on spilled material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : clear

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Odor	:	Ether-like odor.
Odor Threshold	:	No Data Available.
pH	:	No Data Available.
Melting point/freezing point	:	-83 °C (1,013 hPa)
Boiling point/boiling range	:	189.6 °C (1,013 hPa)
Flash point	:	75 °C (1,013 hPa)
Evaporation rate	:	0.02 (butyl acetate = 1)
Flammability (solid, gas)	:	Not applicable
Self-ignition	:	206.5 °C 1,013 hPa
Upper explosion limit / Upper flammability limit	:	14 vol%
Lower explosion limit / Lower flammability limit	:	1.1 vol%
Vapor pressure	:	~ 0.37 hPa (20 °C)
Relative vapor density	:	~ 5.1 (16 - 32 °C) (Air = 1.0)
Density	:	0.95 g/cm ³ (20 °C)
Solubility(ies) Water solubility	:	completely miscible (25 °C)
Partition coefficient: n-octanol/water	:	log Pow: 0.004 (25 °C)
Decomposition temperature	:	no data available
Viscosity Viscosity, kinematic	:	4.55 mm ² /s (20 °C) (static)
Explosive properties	:	Not explosive

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Oxidizing properties : Not considered an oxidizing agent.

Molecular weight : 148.2 g/mol

10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : None reasonably foreseeable.

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.

Incompatible materials : Air or oxygen.
Moisture and humidity.
Strong oxidizing agents.
May react with oxygen to form peroxides.

Hazardous decomposition products : Not expected to decompose under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

Dipropylene Glycol Monomethyl Ether:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC0 (Rat): > 1.66 mg/l
Exposure time: 7 HOURS
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 9,510 mg/kg

Skin corrosion/irritation

Components:

Dipropylene Glycol Monomethyl Ether:

Assessment : No skin irritation

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Serious eye damage/eye irritation

Components:

Dipropylene Glycol Monomethyl Ether:

Assessment : No eye irritation

Respiratory or skin sensitization

Components:

Dipropylene Glycol Monomethyl Ether:

Assessment : Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Components:

Dipropylene Glycol Monomethyl Ether:

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Components:

Dipropylene Glycol Monomethyl Ether:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Components:

Dipropylene Glycol Monomethyl Ether:

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

STOT - single exposure

Components:

Dipropylene Glycol Monomethyl Ether:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

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STOT - repeated exposure**Components:****Dipropylene Glycol Monomethyl Ether:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity**Components:****Dipropylene Glycol Monomethyl Ether:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Dipropylene Glycol Monomethyl Ether:**

Toxicity to fish : LC50 (Poecilia reticulata): > 1,000 mg/l
Exposure time: 96 HOURS

Toxicity to daphnia and other : EC50 (Daphnia magna.): 1,919 mg/l
aquatic invertebrates Exposure time: 48 HOURS

Toxicity to algae/aquatic : ErC50 (Pseudokirchneriella subcapitata): > 969 mg/l
plants Exposure time: 96 HOURS

Toxicity to microorganisms : EC10 (Activated sludge): 4,168 mg/l
Exposure time: 18 HOURS

Persistence and degradability**Components:****Dipropylene Glycol Monomethyl Ether:**

Biodegradability : Result: rapidly biodegradable
Biodegradation: 76 - 96 %

Bioaccumulative potential**Components:****Dipropylene Glycol Monomethyl Ether:**

Bioaccumulation : Remarks: This material is not expected to bioaccumulate.

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Remarks: This material is highly soluble in water and should not bioaccumulate in aquatic or terrestrial organisms.

Partition coefficient: n-octanol/water : log Pow: 0.004 (25 °C)

Mobility in soil**Components:****Dipropylene Glycol Monomethyl Ether:**

Distribution among environmental compartments : Remarks: If released to the environment, this substance is expected to partition mainly into water (including soil groundwater and perhaps porewater).

Stability in soil : Remarks: Low absorption to soil particulates predicted

Other adverse effects**Product:**

Results of PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:**Dipropylene Glycol Monomethyl Ether:**

Environmental fate and pathways : This material is volatile and water soluble. It may enter soil and water. This material is likely to evaporate from dry soil but not from water. It is not expected to adsorb onto soils or sediments.

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Contaminated product, soil, or water may be hazardous waste.
Dispose of contents/ container to an approved landfill.
Use registered transporters.
Burn concentrated liquids.
Assure emissions comply with applicable regulations.
Dilute aqueous waste may biodegrade.
Avoid overloading/poisoning plant biomass.
Assure effluent complies with applicable regulations.

Contaminated packaging : Do not burn, or use a cutting torch on, the empty drum.
Empty containers should be taken to an approved waste han-

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ding site for recycling or disposal.

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 DIPROPYLENE GLYCOL METHYL ETHER)

Pollution category : Z

Ship type : 3

Other information : Not regulated for IMDG or IATA

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Global Inventory Status

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

Country/Region	Inventory	Status Description
Australia	AICS	Listed
Canada	DSL	Listed
China	IECSC	Listed
Europe	REACH	See Compliance Statement*
Japan	ENCS	Listed
Korea	K REACH	Pre-registration period *
New Zealand	NZIoC	Listed
Philippines	PICCS	Listed
United Kingdom	UK REACH	See Compliance Statement*
United States of America	TSCA	Listed
Taiwan	TCSCA	Listed
Turkey	KKDIK	Pre-registration period *

* If the product has been purchased domestically from the notifying/registering legal entity of the LyondellBasell group of companies. We confirm that all substances (in this preparation) have been registered in accordance with the deadlines set forth in the applicable regulation. During the "Pre-registration period", we confirm that all substances in this preparation have been pre-registered or, where required under the regulation, registered, and that we have the intention to proceed with their registration in accordance with the deadlines set forth in the regulation. For more information, please contact reach@lyondellbasell.com.

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† For more information on the status of this material, please contact chemical control at global.chem.control@lyondellbasell.com.

16. OTHER INFORMATION**Further information**

Contact Point : Maurice Li, Technical Service Manager - Product Stewardship

Full text of other abbreviations

OEL (TW) : Taiwan (TW)

OEL (TW) / TWA : TWA

OEL (TW) / STEL : STEL

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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