

Glycol Ether PM SOLVENT

Gen. Variant: SDS_US_GHS

Version 1.0

Revision Date 09/05/2014

Print Date 11/20/2014

SDS No.: BE648

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Glycol Ether PM SOLVENT
CAS Number: 107-98-2
Chemical characterization : Propylene Glycol Ethers
Chemical Name : 1-Methoxy-2-propanol
Synonyms : Propylene glycol monomethyl ether, PGME

Use of the Substance/Mixture : Solvent

Company : Lyondell Chemical Company
LyondellBasell Tower, Suite 300
1221 McKinney St.
P.O. Box 2583
Houston Texas 77252-2583

Telephone : Customer Service 888 777-0232
Product Safety 800 700-0946

Emergency telephone : CHEMTREC USA 800-424-9300
LYONDELL 800-245-4532

E-mail address product.safety@lyondellbasell.com

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids Category 3
Specific target organ systemic toxicity - single exposure Category 3
Central nervous system

GHS Classification Scale (1= severe hazard; 4= slight hazard)

Label elements

Hazard symbols :



Signal Word : Warning

Hazard Statements : H226 Flammable liquid and vapor.
H336 May cause drowsiness or dizziness.

Precautionary Statements : **Prevention**
P210 Keep away from open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.

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P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Other hazards

No additional information available.

3. Composition/information on ingredients**Substances****Ingredients**

Chemical Name	CAS-No. EC-No.	Weight %	Component Type
1-Methoxy-2-propanol	107-98-2	99.5 - 100.0 %	A
2-Methoxy-1-propanol	1589-47-5	<0.5 %	C

Key:

(A) Substance

(C) Impurity

SECTION 4. FIRST AID MEASURES**First aid procedures**

General advice

: After adequate first aid, no further treatment is required unless symptoms reappear.

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 2 of this SDS.

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Consult a physician/doctor if necessary.
Show this material safety data sheet to the doctor in attendance.

- If inhaled : If overcome by exposure, remove victim to fresh air immediately.
Give oxygen or artificial respiration as needed.
Remove person to fresh air. If signs/symptoms continue, get medical attention.
- 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 ill effect or irritation develops.
- In case of eye contact : Immediately flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower lids. If pain or irritation persists, promptly obtain medical attention.
- If swallowed : Do not induce vomiting. Risk of damage to lungs exceeds poisoning risk.
Obtain emergency medical attention.

Notes to physician

- Treatment : Treat symptomatically.
Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5. FIRE-FIGHTING MEASURES**Flammable properties**

Flash point : 88 °F (31 °C)
at 1,013 hPa (760 mm Hg)
Method: (SETA)

Autoignition temperature : 549 °F (287 °C)
at 1,013 hPa (760 mm Hg)

Lower explosion limit : 1.48 vol%

Upper explosion limit : 13.74 vol%

Fire fighting

Suitable extinguishing media : Use alcohol foam, water spray or fog
Use DRY chemicals, CO2, water spray

Unsuitable extinguishing media : No additional information available.

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Protective equipment and precautions for firefighters

- Specific hazards during fire fighting : Individuals should perform only those fire-fighting procedures for which they have been trained. Fire fighters should wear self-contained breathing apparatus in the positive pressure mode with a full face piece when there is a possibility of exposure to smoke, fumes or hazardous decomposition products. Cool tanks and containers exposed to fire with water.
Water may be ineffective in firefighting due to low flash point. Burning liquid may float on water. Even if material is water soluble, may not be practical to extinguish fire by water dilution. Notify authorities immediately if liquid enters sewer/public waters.
- Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Methods for containment / Methods for cleaning up : Flammable liquid. Release can cause fire or explosion. Vapors may ignite. Equip responders with proper protection extinguish all ignition sources. Blanket with firefighting foam. Contain spill with dike to prevent entry into sewers or waterways. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spills, soak up with absorbent material and place in properly labeled containers for disposal. All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

SECTION 7. HANDLING AND STORAGE**Handling**

- Advice on safe handling : For industrial use only. Keep container tightly closed when not in use. 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

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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.

Storage

Requirements for storage areas and containers

: 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.

8. Exposure controls/personal protection**Control parameters****Ingredients with workplace control parameters****Occupational Exposure Limits**

Ingredients	CAS-No.	Type	Limit Value	Basis Revision Date	Additional Information
1-Methoxy-2-propanol	107-98-2	STEL	100 ppm	US (ACGIH) 2013	
1-Methoxy-2-propanol	107-98-2	TWA	50 ppm	US (ACGIH) 2013	

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Consult local authorities for acceptable exposure limits.

Exposure controls**Engineering measures**

General room or local exhaust ventilation is usually required to meet exposure limit(s).

Personal protective equipment

- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hand protection : Wear chemical resistant gloves such as:
Neoprene.
- Eye and face protection : Chemical splash goggles and/or face shield should be worn.
- Skin and body protection : Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn.
- Hygiene measures : Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

- Physical state : liquid
- Color : Clear, colorless.
- Odor : Ether-like odor.
- Odor Threshold : 10 ppm
Odor is not an adequate warning of potentially hazardous ambient air concentrations.

Safety data

- Flash point : 88 °F (31 °C)

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	at 1,013 hPa (760 mm Hg)
	Method: (SETA)
Lower explosion limit	: 1.48 vol%
Upper explosion limit	: 13.74 vol%
Flammability (solid, gas)	: Not applicable
Oxidizing properties	: Not considered an oxidizing agent.
Autoignition temperature	: 549 °F (287 °C) at 1,013 hPa (760 mm Hg)
Molecular weight	: 90.12 g/mol
Decomposition temperature	: not determined
pH	: 7 aqueous phase
Melting point/freezing point	: -141 °F (-96 °C) at 1,013 hPa (760 mm Hg)
Boiling point/boiling range	: 248.31 °F (120.17 °C) at 1,013 hPa (760 mm Hg)
Vapor pressure	: 15.6 hPa (11.7 mm Hg) at 77 °F (25 °C)
Density	: 0.916 g/cm ³ at 77 °F (25 °C)
Water solubility	: ~200 g/l at 68 °F (20 °C) Miscible in water.
Partition coefficient: n-octanol/water	: log Pow: 1.0 at 68 °F (20 °C)
Viscosity, dynamic	: 1.7 mPa.s at 77 °F (25 °C)
Relative vapor density	: >3.0 at 59.9 - 90.0 °F (15.5 - 32.2 °C)
Surface tension	: 70.7 mN/m 1.0g/l at 68 °F (20 °C)
Explosive properties	: Not explosive

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Remarks - Other information : Volatile Characteristics:, Moderate: 1.0 to 10.0%

SECTION 10. STABILITY AND REACTIVITY

- Reactivity : Will not occur.
- Chemical stability : Stable
- Conditions to avoid : Extended contact with air or oxygen.
Reacts with air to form peroxides.
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.
- Materials to avoid : Strong oxidizing agents.
Air or Oxygen
Moisture and humidity.
- Thermal decomposition : Incomplete combustion may produce carbon monoxide and other toxic gases.
- Hazardous reactions : Not expected to occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Product Summary : The below given information is based on the assessment of the product including impurities.

Acute toxicity

Acute oral toxicity : Based on acute toxicity values, not classified.
High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

: LD50: 4,016 mg/kg
Species: Rat

Acute inhalation toxicity

: Based on acute toxicity values, not classified.
Exposure to vapor may cause irritation of the eyes, nose, or throat.
Exposure to very high concentrations of aerosols may cause CNS depression.

: LC50: 25.8 mg/l
Exposure time: 6 HOURS
Species: Rat

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- Acute dermal toxicity** : Based on acute toxicity values, not classified.
: LD50: > 2,000 mg/kg
Species: Rabbit
- Skin corrosion/irritation** : Based on skin irritation values, not classified.
May cause mild skin irritation
- Serious eye damage/eye irritation** : Based on eye irritation values, not classified.
May cause slight transient eye irritation.
- Respiratory or skin sensitization** : Respiratory sensitization
Not classified
No study available.
: Skin sensitization
Not classified
No adverse effect observed.
- Chronic toxicity**
- Carcinogenicity : Not classified
No adverse effect observed.
- Germ cell mutagenicity : Not classified
No adverse effect observed.
- Reproductive toxicity**
- Effects on fertility / : Not classified
Effects on or via lactation : No adverse effect observed.
- Effects on Development : Not classified
The beta isomer of PGME, 2-Methoxy-1-Propanol, has been shown to produce developmental toxicity in animals. Developmental toxicity studies on PGME product, containing high levels of the beta-isomer impurity, were negative. Therefore the product is not classified for developmental toxicity.
- Target Organ Systemic Toxicant - Single exposure** : Classified, May cause drowsiness or dizziness.
: High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and

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death in cases of severe over-exposure).

Target Organ Systemic Toxicant - Repeated exposure : Based on repeated exposure toxicity values, not classified.

Aspiration hazard : Based on physico-chemical values or lack of human evidence, not classified.

12. ECOLOGICAL INFORMATION**Ecotoxicology Assessment**

Acute aquatic toxicity : Based on acute aquatic toxicity values, not classified.

Chronic aquatic toxicity : Not classified, based on readily biodegradability and low acute toxicity.

Toxicity to fish :
Acute toxicity to fish is very low.

Toxicity to daphnia and other aquatic invertebrates : Acute toxicity to freshwater and marine invertebrates is very low.

Toxicity to algae : Acute toxicity to aquatic plants very low.

Toxicity to bacteria : Low toxicity to sewage microbes.

Toxicity to fish (Chronic toxicity) : no data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : no data available

Persistence and degradability

Biodegradability : 96 %
Rapidly degradable.
(After 28 days in a ready biodegradability test)

Bioaccumulative potential

Bioaccumulation : Bioconcentration factor (BCF): 3.16
This material is not expected to bioaccumulate.

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Mobility in soil

Surface tension	:	70.7 mN/m 1.0g/l at 20 °C
Distribution among environmental compartments	:	Stability in water no data available Stability in soil no data available Low absorption to soil particulates predicted
Additional advice Environmental fate and pathways	:	No additional information available.

Results of PBT and vPvB assessment

Not applicable.

Other adverse effects

Additional ecological information	:	No additional information available.
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SECTION 13. DISPOSAL CONSIDERATIONS

Further information	:	Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Comply with federal, state, or local regulations for disposal. Dispose of as hazardous waste in compliance with local and national regulations.
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SECTION 14. TRANSPORT INFORMATION

DOT	
UN number	: 3092
Description of the goods	: 1-Methoxy-2-propanol
Class	: 3
Packing group	: III
Labels	: 3

SECTION 15. REGULATORY INFORMATION

If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

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SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

SARA 311/312

Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312:

Immediate (Acute) Health Hazard.
Fire Hazard.

SARA 313

This product contains no known chemicals regulated under SARA 313.

State Reporting

This material is not known to contain a chemical substance known to the State of California to cause cancer, reproductive, or developmental toxicity under California Proposition 65. However, LyondellBasell has not tested for the presence of listed chemical substances.

This product contains the following chemicals regulated by New Jersey's Worker and Community Right to Know Act:

107-98-2 1-Methoxy-2-propanol

This product contains the following chemicals regulated by Massachusetts' Right to Know Law:

107-98-2 1-Methoxy-2-propanol

This product contains the following chemicals regulated by Pennsylvania's Right to Know Act:

107-98-2 1-Methoxy-2-propanol

Other international regulations**Global Inventory Status**

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

*Additional Explanatory Status Statements follow the table, as necessary.

Country/Region	Inventory	Status Description
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
United States of America	TSCA	Compliant

REACH status

If the product has been purchased from any company of the LyondellBasell group of companies registered in the European Union, we confirm that the chemical substance in this product has been pre-registered or, where required under REACH, registered, and that we have the intention to proceed

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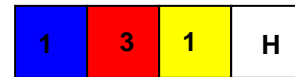
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with any required registration in accordance with the deadlines set forth in REACH. (Regulation (EU) No. 1907/2006)

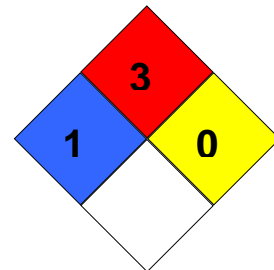
Contact product.safety@lyondellbasell.com for additional global inventory information.

SECTION 16. OTHER INFORMATION**Further information****HMIS Classification**

: Health Hazard: 1
 Flammability: 3
 Physical hazards: 1
 PPE: Splash Goggles, Gloves,
 Apron, Vapor Respirator

**NFPA Classification**

: Health Hazard: 1
 Fire Hazard: 3
 Instability: 0

**Other Information**

HMIS rating scale (0 = minimal hazard; 4 = severe hazard)

NFPA rating scale (0 = minimal hazard; 4 = severe hazard)

Material safety datasheet sections which have been updated:

Revised Section(s): 1 2 3 8 11 12 15 Revision Date August 31 2014

Disclaimer

This document is generated for the purpose of distributing health, safety, and environmental data.

Information is correct to the best of our knowledge at the date of the SDS publication.

It is not a specification sheet nor should any displayed data be construed as a specification.

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This product(s) may not be used in:

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Disclaimer

III Medical Devices; European Union Class II Medical Devices; film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices; packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration; tobacco related products and applications, electronic cigarettes and similar devices, and pressure pipe or fittings that are considered a part or component of a nuclear reactor. Additionally, the product(s) may not be used in: (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices; (ii) applications involving permanent implantation into the body; (iii) life-sustaining medical applications; and (iv) lead, asbestos or MTBE related applications. All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

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