## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product 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 |
| Use of the Substance/Mixture | : | Solvent |
| Company | : | Lyondell Chemical Company<br>LyondellBasell Tower, Suite 300<br>1221 McKinney St.<br>P.O. Box 2583<br>Houston Texas 77252-2583 |
| Telephone | : | Customer Service 888 777-0232<br>Product Safety 800 700-0946 |
| Emergency telephone | : | CHEMTREC USA 800-424-9300<br>LYONDELL 800-245-4532 |
| E-mail address | | product.safety@lyondellbasell.com |

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

| | |
|---|---|
| Flammable liquids | Category 4 |
| Specific target organ systemic toxicity - single exposure | Category 3 |

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

### Label elements

**Hazard symbols** :

**Signal Word** : Warning

**Hazard Statements** : H227 Combustible liquid.
H335 May cause respiratory irritation.

**Precautionary Statements** : **Prevention**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271 Use only outdoors or in a well-ventilated area.

**Response**
P312 Call a POISON CENTER or doctor/ physician if you



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feel unwell.

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

**Other hazards**

No additional information available.

## 3. Composition/information on ingredients

**Substances**

Chemical nature : Substance

**Ingredients**

| Chemical Name | CAS-No.<br>EC-No. | Weight % | Component Type |
|---|---|---|---|
| Dipropylene Glycol Monomethyl Ether | 34590-94-8 | > 99.0 % | A |

Key:
(A) Substance

## SECTION 4. FIRST AID MEASURES

**First aid procedures**

General advice : 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.
Consult a physician/doctor if necessary.
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.<br>If eye irritation persists, consult a specialist. |
| If swallowed | : | This material may be a slight health hazard if ingested in large quantities.<br>If large quantity swallowed, give lukewarm water (pint/ 1/2 litre) if victim completely conscious/alert.<br>Do not induce vomiting. Risk of damage to lungs exceeds poisoning risk.<br>Obtain emergency medical attention. |

**Notes to physician**

| | | |
|---|---|---|
| Symptoms | : | High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure). |
| Treatment | : | Treat symptomatically.<br>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 | : | 167 °F (75 °C)<br>at 1,013 hPa (760 mm Hg) |
| Autoignition temperature | : | 403.7 °F (206.5 °C)<br>at 1,013 hPa (760 mm Hg) |
| Lower explosion limit | : | 1.1 vol% |
| Upper explosion limit | : | 14 vol% |
| Flammability (solid, gas) | : | Not applicable |

**Fire fighting**

| | | |
|---|---|---|
| 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. |
| Further information | : | Cool containers with flooding quantities of water until well after fire is out. |

**Protective equipment and precautions for firefighters**

| | | |
|---|---|---|
| Specific hazards during fire | : | Heat from fire can generate flammable vapor. |

| | | |
|---|---|---|
| fighting | | When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined.<br>Flammable vapors may be heavier than air and travel long distances along the ground before igniting and flashing back to vapor source.<br>Fine sprays/mists may be combustible at temperatures below normal flash point.<br>Heat may build enough pressure to rupture closed containers/spreading fire/increasing risk of burns/injuries.<br>Cool containers with flooding quantities of water until well after fire is out.<br>Always stay away from tanks engulfed in fire.<br>For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.<br>Move containers from fire area if it can be done without risk.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : | Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.<br>Structural firefighter's protective clothing will only provide limited protection. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions | : | Evacuate personnel to safe areas.<br>Keep people away from and upwind of spill/leak.<br>Ensure adequate ventilation.<br>Use personal protective equipment.<br>Eliminate all sources of ignition.<br>Clean-up to be performed only by trained and properly equipped personnel. |
| Methods for containment / Methods for cleaning up | : | Eliminate all sources of ignition.<br>All equipment used when handling this product must be grounded.<br>Do not touch or walk through spilled material.<br>Stop leak if you can do it without risk.<br>Prevent entry into waterways, sewers, basements or confined areas.<br>A vapor suppressing foam may be used to reduce vapors.<br>Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.<br>Use clean non-sparking tools to collect absorbed material. |
| Additional advice | : | Keep non-involved personnel away from the area of spillage.<br>See section 8 for additional PPE information.<br>See section 13 for disposal information. |

## SECTION 7. HANDLING AND STORAGE

### Handling

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.

### 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.

Advice on common storage : 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.

Other data : Stable under recommended storage conditions.

## 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 |
|---|---|---|---|---|---|
| Dipropylene Glycol Monomethyl Ether | 34590-94-8 | STEL | 150 ppm | US (ACGIH) 2012 | |
| Dipropylene Glycol Monomethyl Ether | 34590-94-8 | TWA | 100 ppm | US (ACGIH) 2012 | |
| Dipropylene Glycol Monomethyl Ether | 34590-94-8 | IDLH | 600 ppm | NIOSH September 2007 | |
| Dipropylene Glycol Monomethyl Ether | 34590-94-8 | TWA | 100 ppm 600 mg/m3 | US (OSHA) June 23, 2006 | |

Consult local authorities for acceptable exposure limits.

### Exposure controls

#### Engineering measures

Local exhaust in addition to general room ventilation may be 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.
If exposure can exceed the occupational exposure limit(s), use approved respiratory protection equipment.

Hand protection : Wear chemical resistant gloves such as:
Neoprene.

Eye and face 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.

| | | |
|---|---|---|
| Hygiene measures | : | Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.<br>Use good personal hygiene practices.<br>Wash hands before eating, drinking, smoking, or using toilet facilities.<br>Take off contaminated clothing and wash before reuse.<br>Use care in walking on spilled material. |
| Protective measures | : | Wear suitable protective equipment. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

| | | |
|---|---|---|
| Physical state | : | liquid |
| Color | : | Clear, colorless. |
| Odor | : | Ether-like odor. |

**Safety data**

| | | |
|---|---|---|
| Flash point | : | 167 °F (75 °C)<br>at 1,013 hPa (760 mm Hg) |
| Lower explosion limit | : | 1.1 vol% |
| Upper explosion limit | : | 14 vol% |
| Flammability (solid, gas) | : | Not applicable |
| Oxidizing properties | : | Not considered an oxidizing agent. |
| Autoignition temperature | : | 403.7 °F (206.5 °C)<br>at 1,013 hPa (760 mm Hg) |
| Molecular weight | : | 148.2 g/mol |
| Decomposition temperature | : | not determined |
| pH | : | No Data Available. |
| Melting point/freezing point | : | -117 °F (-83 °C)<br>at 1,013 hPa (760 mm Hg) |
| Boiling point/boiling range | : | 373.3 °F (189.6 °C)<br>at 1,013 hPa (760 mm Hg) |
| Vapor pressure | : | ~ 0.37 hPa (0.28 mm Hg) |

| | | |
|---|---|---|
| | | at 68 °F (20 °C) |
| Density | : | 0.95 g/cm3<br>at 68 °F (20 °C) |
| Water solubility | : | at 77 °F (25 °C)<br>completely miscible |
| Partition coefficient: n-octanol/water | : | log Pow: 0.004<br>at 77 °F (25 °C) |
| Viscosity, dynamic | : | 4.000 mPa.s<br>at 77 °F (25 °C)<br>(Brookfield). |
| Viscosity, kinematic | : | 4.55 mm2/s<br>at 68 °F (20 °C)<br>(static) |
| Relative vapor density | : | ~5.1<br>at 61 - 90 °F (16 - 32 °C)<br>(Air = 1.0) |
| Evaporation rate | : | 0.02<br>(butyl acetate = 1) |
| Explosive properties | : | Not explosive |
| Remarks - Other information | : | Hygroscopic. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Will not occur. |
| Chemical stability | : | Stable under recommended storage conditions. |
| Conditions to avoid | : | Extended contact with air or oxygen.<br>The potential for peroxide formation is enhanced when this solvent is used in processes such as distillation.<br>Heat, sparks, open flame, other ignition sources, and oxidizing conditions.<br>Ignition may occur at temperatures below those published in the literature as autoignition or ignition temperatures. |
| Materials to avoid | : | Air or oxygen.<br>Moisture and humidity.<br>Strong oxidizing agents.<br>May react with oxygen to form peroxides. |

| | | |
|---|---|---|
| Thermal decomposition | : | Carbon Monoxide and other toxic vapors. |
| Hazardous reactions | : | Will not 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.
Ingestion of very large amounts may cause CNS depression, respiratory failure, and death in cases of severe over-exposure.

: LD50: > 5,000 mg/kg
Species: Rat

**Acute inhalation toxicity** : Based on acute toxicity values, not classified.
May cause mild CNS depression.
Exposure to vapor may cause irritation of the eyes, nose, or throat.

: LC50: > 275 ppm
Exposure time: 7 HOURS
Species: Rat

**Acute dermal toxicity** : Based on acute toxicity values, not classified.

: LD50: > 9,500 mg/kg
Species: Rat

**Skin corrosion/irritation** : Based on skin irritation values, not classified.

**Serious eye damage/eye irritation** : Based on eye irritation values, not classified.

**Respiratory or skin sensitization** : Respiratory sensitization
no data available
No study available.

: Skin sensitization
no data available
No adverse effect observed.

**Chronic toxicity**

| | | |
|---|---|---|
| Carcinogenicity | : | Not classified<br>No adverse effect observed. |
| Germ cell mutagenicity | : | Not classified<br>No adverse effect observed. |

**Reproductive toxicity**

| | | |
|---|---|---|
| Effects on fertility / Effects on or via lactation | : | Not classified<br>No adverse effect observed. |
| Effects on Development | : | Not classified<br>No adverse effect observed. |
| **Target Organ Systemic Toxicant - Single exposure** | : | Classified |
| | : | May cause respiratory irritation. |
| **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 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)** : Low chronic toxicity to aquatic invertebrates.

**Persistence and degradability**

**Biodegradability** : 76 - 92 %
Rapidly degradable.
(After 28 days in a ready biodegradability test)

**Bioaccumulative potential**

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

**Mobility in soil**

**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.

## SECTION 13. DISPOSAL CONSIDERATIONS

Further information : 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 handling site for recycling or disposal.

## SECTION 14. TRANSPORT INFORMATION

**DOT**

| | | |
|---|---|---|
| UN number | : | NA1993 |
| Description of the goods | : | Combustible liquid, n.o.s. |
| | : | (DIPROPYLENE GLYCOL METHYL ETHER) |
| Class | : | CL |
| 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. Export notification required.

**TSCA 12b**

Dipropylene Glycol Monomethyl Ether / CAS# 34590-94-8. TSCA section 4

**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/Health
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:
34590-94-8 Dipropylene Glycol Monomethyl Ether

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

34590-94-8 Dipropylene Glycol Monomethyl Ether

This product contains the following chemicals regulated by Pennsylvania's Right to Know Act:
34590-94-8 Dipropylene Glycol Monomethyl Ether

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

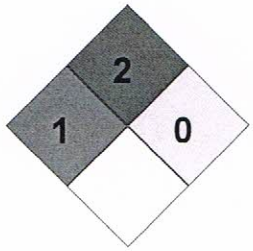
Contact product.safety@lyondellbasell.com for additional global inventory information.

## SECTION 16. OTHER INFORMATION

**Further information**

**HMIS Classification** : Health Hazard: 1
Flammability: 2
Physical hazards: 0

**NFPA Classification** : Health Hazard: 1
Fire Hazard: 2
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

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