1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name	:	Polymeg 2000 POLYOL
CAS Number:	:	25190-06-1
Chemical characterization	:	Polyol
Chemical name	:	Polytetramethylene ether glycol
Synonyms	:	This SDS covers Polymeg 650, 1000 & 2000
Identified uses	:	Polymer production

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

Company Telephone
Customer Service 888 777-0232
product.safety@lyb.com

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

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

2. HAZARDS IDENTIFICATION

GHS Classification

Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Label elements

Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Other hazards

No additional information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Components

Chemical name	CAS-No. EC-No.	Weight %	Component Type
Polytetramethylene ether glycol	25190-06-1	>= 99.0 %	A

Key:
(A) Substance

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.
Show this material safety data sheet to the doctor in attendance.

If inhaled : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

In case of skin contact : Thoroughly wash effected area with mild soap and water. If irritation persist, seek medical attention.
Wash clothing before wearing again.
If molten material contacts the skin, immediately flush with large amounts of water to cool the affected tissue and polymer.
Obtain emergency medical attention.

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 : If swallowed, give lukewarm water (pint/ 1/2 litre) and induce vomiting if victim completely conscious/alert.
Obtain medical attention.

Notes to physician

Symptoms : Slight eye irritant.
Slight skin irritant.

Treatment : Treat symptomatically.
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	:	No additional information available.
Specific hazards during fire fighting	:	Decomposition hazard at elevated temperatures. Heat/contamination can release extremely flammable vapors. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Move containers from fire area if it can be done without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. 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.
Special protective equipment for fire-fighters	:	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighter's protective clothing will only provide limited protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Eliminate all sources of ignition. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear recommended personal protective equipment.
Environmental precautions	:	Prevent entry into waterways, sewers, basements or confined areas. Clean contaminated floors and objects thoroughly while observing environmental regulations.

Methods for containment / Methods for cleaning up	:	Collect and contain as any solid. Avoid contact with hot product - may cause burns. Slippery walking/spread granular cover or soak up. For large molten spills, flush with copious amounts of cold water to freeze material. Sweep/shovel into suitable disposal containers. Use steam for final clean-up.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	:	Avoid contact with eyes, skin and clothing. Wash thoroughly after handling with soap and water. This material is stabilized during normal handling to prevent degradation, and the potential formation of highly flammable tetrahydrofuran vapors. Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. This material is loaded and bulk shipped at a minimum temperature of 65 ºC (150 ºF). Normal precautions should be maintained in handling hot liquids during the unloading of shipping and storage containers. During transfer of product, ground container and insure that all conveying equipment is properly grounded. Handle empty containers with care - residue can burn if heated.
Fire-fighting class	:	OSHA/NFPA Class IIIB combustible liquid.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Hygroscopic. Keep container tightly closed and properly labeled. Monitor inhibitor (BHT) content to maintain appropriate concentration. Storage temperature for this material should generally be maintained between 55-65 ºC (130-150 ºF). Storage under nitrogen atmosphere is recommended to minimize possible formation of highly reactive peroxides. Store away from strong oxidizers/strong acids. Store only in well ventilated, easily accessible area, away from heat/spark and open flame.

Specific end use(s)

: See Section 1.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Consult local authorities for acceptable exposure limits.

Exposure controls

Engineering measures

No special ventilation is recommended under anticipated conditions of normal use beyond that needed for normal comfort control.
At elevated temperatures, special ventilation may be required even if the flash point has not been exceeded.

Personal protective equipment

Respiratory protection	:	No occupational exposure limit(s) have been established for this material or its components. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hand protection	:	Wear chemical resistant gloves such as: Rubber
Eye and face protection	:	Safety glasses with side-shields
Skin and body protection	:	Wear heat protective gloves and clothing if there is a potential for contact with heated material.
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. Material spilled on hard surface can be a serious slipping/falling hazard. Spread coarse, inert granular cover such as sand, on any affected walking surface.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Solid. liquid at 40 °C
Color	:	White in solid form; clear, colorless in liquid form.
Odor	:	No odor.
Odor Threshold	:	No value available.
Flash point	:	~ 180 - 246 °C Method: DIN 51376
Lower explosion limit	:	Not Applicable.
Upper explosion limit	:	Not applicable.
Flammability (solid, gas)	:	Not applicable
Oxidizing properties	:	Not considered an oxidizing agent.
Decomposition temperature	:	not determined
Melting point/freezing point	:	-14 - 35 °C
Boiling point/boiling range	:	(Decomposes).
Vapor pressure	:	negligible
Density	:	0.96 - 0.99 g/cm3 at 40 °C
Water solubility	:	Slight (.1 to Less Than 1 Percent).
Partition coefficient: n-octanol/water	:	No Data Available.
Viscosity, dynamic	:	60 - 599 mPa.s at 40 °C
Relative vapor density	:	Very high.
Explosive properties	:	Not explosive
Conductivity	:	
Refractive index	:	
Other Information	:	Hygroscopic., Additional properties may be listed in Sections 2 and 5.

10. STABILITY AND REACTIVITY

Reactivity	:	Will not occur.
Chemical stability	:	Stable under recommended storage conditions.
Hazardous reactions	:	Not expected to occur.
Conditions to avoid	:	High temperatures and severe oxidizing conditions. Excess heat can release hazardous decomposition products.
Materials to avoid	:	Strong oxidizers such as hydrogen peroxide, nitric acid, sulphuric acid, etc. Contact with acids can release very flammable tetrahydrofuran.
Hazardous decomposition products	:	Decomposition can release very flammable tetrahydrofuran, and oxides of carbon.
Thermal decomposition	:	Thermal decomposition begins at approximately 150 ºC / 300 ºF, releasing tetrahydrofuran.

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.
	:	LD50: > 5,000 mg/kg Species: Rat
Acute inhalation toxicity	:	Not classified no data available
Acute dermal toxicity	:	Not classified no data available
Skin corrosion/irritation	:	Not classified May cause mild skin irritation
Serious eye damage/eye irritation	:	Not classified May cause slight transient eye irritation.

Respiratory or skin sensitization : Respiratory sensitization
Not classified
No study available.

: Skin sensitization
Not classified
No study available.

Chronic toxicity

Carcinogenicity : Not classified
Not listed by IARC, NTP, OSHA or EPA.

Germ cell mutagenicity : Not classified
No study available.

Reproductive toxicity

Effects on fertility / Effects on or via lactation : Not classified
No study available.

Effects on Development : Not classified
No study available.

Target Organ Systemic Toxicant - Single exposure : Not classified, No study available.

Target Organ Systemic Toxicant - Repeated exposure : Not classified, no data available

Aspiration hazard : Not applicable.

12. Ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified, No data available.

Long-term (chronic) aquatic hazard : Not classified, No data available.

Toxicity to fish : Expected to be low acute toxicity to fish.

Toxicity to daphnia and other aquatic invertebrates : Expected to be low acute toxicity to aquatic invertebrates.

Toxicity to algae : Expected to be low acute toxicity to algae.

Toxicity to bacteria : Expected to be low acute toxicity to microorganisms.

Toxicity to fish (Chronic toxicity) : Expected to be low chronic toxicity to fish.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Expected to be low chronic toxicity to aquatic invertebrates.

Persistence and degradability

Biodegradability : Expected to be biodegradable

Stability in water : no data available

Stability in soil : no data available

Bioaccumulative potential

Bioaccumulation : no data available

Mobility in soil

Distribution among environmental compartments : no data available

Other adverse effects

Environmental fate and pathways : No additional information available.

Other information

Additional ecological information : No additional information available.

13. Disposal considerations

Waste treatment methods

Product : Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes.
Comply with federal, state, or local regulations for disposal.

14. TRANSPORT INFORMATION

Not regulated for transport

15. REGULATORY INFORMATION

TSCA 12b

No substances are subject to TSCA 12(b) export notification requirements.

Significant New Use Rules (SNUR)

No substances are subject to a Significant New Use Rule.

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:

No SARA Hazards

SARA 313

This product contains no known chemicals regulated under SARA 313.

State Reporting

This material does not contain listed substance(s) known to the State of California to cause cancer, birth defects, or other reproductive harm that would require warning under the California Proposition 65 State Drinking Water and Toxic Enforcement Act.
However, LyondellBasell has not tested for the presence of listed chemical substances.

This product contains no known chemicals regulated by New Jersey's Worker and Community Right to Know Act.

No components are subject to the Massachusetts Right to Know Act.

This product contains no known chemicals regulated by Pennsylvania's Right to Know Act.

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
Taiwan	TCSCA	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 registered under REACh, in accordance with the deadlines set forth in REACh. (Regulation (EU) No. 1907/2006)

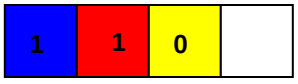
Contact product.safety@lyb.com for additional global inventory information.

16. OTHER INFORMATION

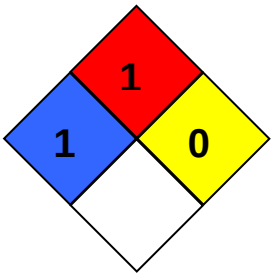
Material safety datasheet sections which have been updated:

Revised Section(s): 15 16

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



NFPA Classification : Health Hazard: 1
Fire Hazard: 1
Instability: 0



Further information

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

Disclaimer

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The Trade Name referenced in section 1 is a trademark owned or used by the LyondellBasell family of companies.

Numerical Data Presentation
The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg.

Language Translations
The information presented in this document has been translated from English by a vendor LyondellBasell believes to be reliable. LyondellBasell and its vendor have made a good-faith effort to verify the accuracy of the translation, but assume no liability or other responsibility for any errors that may have occurred. Please refer to our web site (www.lyondellbasell.com) for the original document written in English.

End of Material Safety Data Sheet