

**GLYCOL ETHER DM JET FUEL GRADE**

Gen. Variant: SDS\_US\_GHS

Version 1.4

Revision Date 11/22/2019

Print Date 06/30/2022

SDS No.: 3379

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

Trade name : GLYCOL ETHER DM JET FUEL GRADE  
 CAS Number: : 111-77-3  
 Chemical characterization : Glycol Ethers  
 Chemical name : 2-(2-methoxyethoxy) ethanol  
 Synonyms : All Grades includes: Industrial and Jet Fuel Grades

Identified uses : Solvent; Fuel

**Company Address**

Equistar Chemicals, LP  
 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  
 EQUISTAR 800-245-4532

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
Reproductive toxicity	Category 2

**Label elements**

Hazard symbols :



Signal word : Warning

Hazard Statements : H227 Combustible liquid.  
 H336 May cause drowsiness or dizziness.  
 H361 Suspected of damaging fertility or the unborn child.

Precautionary : Prevention

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**Statements**

P201 + P202 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

P210 Keep away from open flames/hot surfaces. - No smoking.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ 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 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

**Storage**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P235 Keep cool.

P405 Store locked up.

**Disposal**

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

**Other hazards**

No additional information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substances****Components**

Chemical name	CAS-No. EC-No.	Weight %	Component Type
Diethylene glycol monomethyl ether	111-77-3	<=99.9 %	A

Key:

(A) Substance

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**4. FIRST AID MEASURES**

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

If inhaled : If symptoms are experienced, move victim to fresh air.  
Seek medical attention if discomfort persists.

In case of skin contact : Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. If irritation persists, get medical attention.

In case of eye contact : Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

If swallowed : If product is ingested, do not induce vomiting and contact a physician or Poison Control Center.

**Notes to physician**

Symptoms : central nervous system effects

Hazards : May be harmful if swallowed and enters airways.  
May be harmful if swallowed.  
May cause drowsiness or dizziness.

Treatment : 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 chemicals, CO2, water spray or alcohol-resistant foam  
LARGE FIRE: Use water spray, water fog or alcohol-resistant foam

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- Specific hazards during fire fighting : Avoid sparks, heat, and open flame.  
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. 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.
- Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions : Eliminate all sources of ignition.  
Keep people away from and upwind of spill/leak.  
Avoid breathing mist or vapors.  
Wear recommended personal protective equipment.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Prevent product from entering drains.
- Methods for containment /  
Methods for cleaning up : 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.
- Additional advice : Avoid direct contact with released material. Stay upwind.  
See section 8 for additional PPE information.  
See section 13 for disposal information.

**7. Handling and storage****Precautions for safe handling**

- Advice on safe handling : Do not handle near heat, sparks, or flame. Avoid contact with incompatible agents. Use only with adequate

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ventilation/personal protection. Avoid contact with eyes, skin and clothing. Do not enter storage area unless adequately ventilated. Metal containers involved in the transfer of this material should be grounded and bonded.

It is recommended that any liquid product exposed to air not be highly concentrated by evaporation without first assuring that no peroxide is present.

Fire-fighting class : Combustible liquid.

**Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Store containers in a cool, dry, ventilated, fire resistant area away from sources of ignition and incompatible materials. Keep container tightly closed and properly labeled.

**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**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Emergency shower and eyewash facility should be in close proximity (ANSI Z358.1)

**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 rubber, neoprene or vinyl.

Eye and face protection : Wear safety glasses as minimum eye protection. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

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Skin and body protection : Appropriate protective clothing should be worn to prevent skin contact.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid  
Color : Clear

Odor : Mild odor.  
aromatic

Odor Threshold : No value available.

Flash point : 83.9 °C  
Method: closed cup

Ignition temperature : 215 °C

Lower explosion limit : 1.38 vol%

Upper explosion limit : 22.7 vol%

Oxidizing properties : Not considered an oxidizing agent.

Autoignition temperature : 215 °C

Decomposition temperature : not determined

Melting point/freezing point : -65 °C

Boiling point/boiling range : 193 °C

Vapor pressure : 0.33 hPa  
at 25 °C

Density : 1.025 g/cm<sup>3</sup>  
at 20 °C  
Relative

Water solubility : 100%, completely miscible

Partition coefficient: n-  
octanol/water : at 20 °C  
Log Kow = - 0.46

Viscosity, kinematic : 3.89 mm<sup>2</sup>/s  
at 20 °C

Relative vapor density : 4.1

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(Air = 1.0)

Explosive properties : Not explosive

Other Information : No additional information available.

**10. STABILITY AND REACTIVITY**

Reactivity : Will not occur.

Chemical stability : Stable under recommended storage conditions.  
May form peroxides if in contact with air for long periods of time (days-weeks)

Hazardous reactions : Will not occur.

Conditions to avoid : Heat, sparks, open flames and strong oxidizing conditions.

Materials to avoid : Oxidizers, Acids, Alkalis

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

Thermal decomposition : Carbon oxides (CO, CO<sub>2</sub>)

**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.  
May be harmful if swallowed.

: LD50: 4,160 mg/kg  
Species: Guinea pig

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

: LC0: > 1.2 mg/l  
Exposure time: 6 HOURS  
Species: Rat

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

: LD50: 9,404 mg/kg  
Species: Rabbit

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- Skin corrosion/irritation** : Based on skin irritation values, not classified.
- 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.  
Contains a substance that has a positive carcinogenicity study.  
The weight of evidence for the carcinogenicity of this substance does not meet the criteria for classification.
- Germ cell mutagenicity** : Not classified  
No adverse effect observed.
- Reproductive toxicity**
- Effects on fertility / Effects on or via lactation** : Not classified  
No adverse effect observed.
- Effects on Development** : Classified  
Suspected of damaging the unborn child.
- Target Organ Systemic Toxicant - Single exposure** : Classified, May cause drowsiness or dizziness.  
: Exposure routes: Inhalation, Ingestion  
Target Organs: Central nervous system
- Target Organ Systemic Toxicant - Repeated exposure** : Based on repeated exposure toxicity values, not classified.



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**Aspiration hazard** : Not classified  
May be harmful if swallowed and enters airways.

**12. Ecological information****Ecotoxicology Assessment**

**Short-term (acute) aquatic hazard** : Based on acute aquatic toxicity values, not classified.

**Long-term (chronic) aquatic hazard** : Not classified, based on readily biodegradability and low acute toxicity.

**Toxicity to fish** : Low acute toxicity to fish

**Toxicity to daphnia and other aquatic invertebrates** : Low acute toxicity to aquatic invertebrates.

**Toxicity to algae** : Low toxicity to algae.

**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** : Biodegradation: 100 %  
Rapidly degradable.  
(After 28 days in a ready biodegradability test)

**Bioaccumulative potential**

**Bioaccumulation** : Bioconcentration factor (BCF): 3.16  
Method: (QSAR calculated value)  
This material is not expected to bioaccumulate.

**Mobility in soil**

**Distribution among environmental compartments** : Type: Stability in water  
no data available  
Not expected to hydrolyze readily.

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: Type: Stability in soil  
no data available  
Low absorption to soil particulates predicted

**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 : Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations. Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. The materials resulting from clean-up operations may be hazardous wastes and therefore, subject to specific regulations.

**14. TRANSPORT INFORMATION**

Not regulated for transport

**CFR\_ROAD**

UN number : NA1993  
Description of the goods : COMBUSTIBLE LIQUID, N.O.S.  
(DIETHYLENE GLYCOL MONOMETHYL ETHER)  
Class : CL  
Packing group : III  
Labels : 3

Marine pollutant : no

**CFR\_RAIL**

UN number : NA1993  
Description of the goods : COMBUSTIBLE LIQUID, N.O.S.  
(DIETHYLENE GLYCOL MONOMETHYL ETHER)  
Class : CL  
Packing group : III  
Labels : 3

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Marine pollutant : no

**BLG (MARPOL Annex II)**

Description of the goods : POLY (2-8) ALKYLENE GLYCOL MONOALKYL (C1-C6) ETHER (CONTAINS DIETHYLENE GLYCOL MONOMETHYL ETHER),

Pollution category : Z

Ship type : 3

**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 &amp; 312:

Flammable (gases, aerosols, liquids, or solids)
Specific target organ toxicity (single or repeated exposure)
Reproductive toxicity

**SARA 313**

This product contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:

Component	CASRN	Reporting Threshold
Diethylene glycol monomethyl ether	111-77-3	1.0%
2-Butoxyethanol	111-76-2	1.0%

**State Reporting**

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This material contains the following chemical substance which is regulated under California Proposition 65. However, it is the responsibility of the California business owner to develop his or her own regulatory compliance plan. Contact Product Safety for further information at [product.safety@lyb.com](mailto:product.safety@lyb.com).

Substance	CASRN	Type of Toxicity			
		Carcinogen	Developmental	Repro-Male	Repro-Female
2-Methoxyethanol	109-86-4		X	X	
Ethylene glycol	107-21-1		X		

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

111-76-2            2-Butoxyethanol

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

111-77-3            Diethylene glycol monomethyl ether

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

111-77-3            Diethylene glycol monomethyl ether

107-21-1            Ethylene glycol

109-86-4            2-Methoxyethanol

**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

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

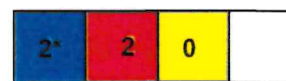
Contact [product.safety@lyb.com](mailto:product.safety@lyb.com) for additional global inventory information.

**16. OTHER INFORMATION****Material safety datasheet sections which have been updated:**

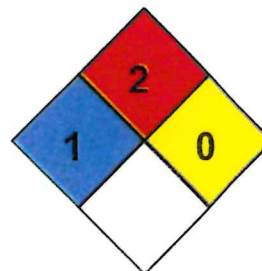
Revised Section(s): 15 16

**HMIS Classification**

: Health Hazard: 2  
Chronic Health Hazard: \*  
Flammability: 2  
Physical hazards: 0

**NFPA Classification**

: Health Hazard: 1  
Fire Hazard: 2  
Instability: 0

**Further information**

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

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

**Disclaimer**

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

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**Disclaimer**

at: <https://www.lyondellbasell.com/en/products-technology/product-safety-stewardship/>  
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](http://www.lyondellbasell.com)) for the original document written in English.

**End of Material Safety Data Sheet**