

Revision Date 14-Feb-2012

Revision Number 4

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

Product Identifier

Product Description: Bis(2-hydroxyethyl)ether
Reach Registration Number 01-2119457857-21
Cat No. 121160000; 121160010; 121160025
Synonyms 2,2'-Oxydiethanol; Diethylene glycol

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
 Acros Organics BVBA
 Janssen Pharmaceuticaaan 3a
 2440 Geel, Belgium
E-mail address begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99
 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300
 CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 4
Specific target organ systemic toxicity (repeated exposure)	Category 2

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s) Xn - Harmful
R-phrases R22 - Harmful if swallowed

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SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Warning

Hazard Statements

H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Diethylene glycol 111-46-6	EEC No. 203-872-2	>95	111-46-6	Xn; R22	Acute Tox. 4 (H302) STOT RE 2 (H373)	01-2119457857-21

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

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Ingestion	Clean mouth with water. Get medical attention.
Inhalation	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.
Notes to Physician	Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Do not get in eyes, on skin, or on clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.. Do not let this chemical enter the environment.

SECTION 7. HANDLING AND STORAGE**Precautions for Safe Handling**

Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Do not ingest.

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

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Specific End Uses
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Control parameters
Exposure limits
Component

Diethylene glycol

European Union	The United Kingdom	France	Belgium	Spain
	TWA: 23ppm TWA: 101 mg/m ³ STEL: 69 ppm STEL: 303 mg/m ³			

Component

Diethylene glycol

Italy	Germany	Portugal	The Netherlands	Finland
	TWA: 10 ppm TWA: 44 mg/m ³			

Component

Diethylene glycol

Austria	Denmark	Switzerland	Poland	Norway
STEL: 40 ppm 15 Minuten STEL: 176 mg/m ³ 15 Minuten TWA: 10 ppm 8 Stunden TWA: 44 mg/m ³ 8 Stunden	TWA: 2.5 ppm 8 timer TWA: 11 mg/m ³ 8 timer	STEL: 40 ppm 15 Minuten STEL: 176 mg/m ³ 15 Minuten MAK: 10 ppm 8 Stunden MAK: 44 mg/m ³ 8 Stunden	NDS: 10 mg/m ³ 8 godzinach	

Component

Diethylene glycol

Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
TWA: 10.0 mg/m ³	TWA: 23 ppm 8 satima. TWA: 101 mg/m ³ 8 satima.	TWA: 23 ppm 8 hr. TWA: 100 mg/m ³ 8 hr.		

Component

Diethylene glycol

Estonia	Gibraltar	Greece	Hungary	Iceland
Skin notation TWA: 10 ppm 8 tundides. TWA: 45 mg/m ³ 8 tundides. STEL: 20 ppm 15 minutites. STEL: 90 mg/m ³ 15 minutites.				TWA: 2.5 ppm 8 klukkustundum. TWA: 11 mg/m ³ 8 klukkustundum. Ceiling: 5 ppm Ceiling: 22 mg/m ³

Component

Diethylene glycol

Latvia	Lithuania	Luxembourg	Malta	Romania
TWA: 10 mg/m ³	TWA: 10 ppm TWA: 45 mg/m ³ Skin notation STEL: 20 ppm STEL: 90 mg/m ³			TWA: 115 ppm 8 ore TWA: 500 mg/m ³ 8 ore STEL: 184 ppm 15 minute STEL: 800 mg/m ³ 15 minute

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Component	Russia - TWA	Slovak Republic	Slovenia	Sweden	Turkey
Diethylene glycol	MAC: 10 mg/m ³	10 44	TWA: 10 ppm 8 urah TWA: 44 mg/m ³ 8 urah STEL: 40 ppm 15 minutah STEL: 176 mg/m ³ 15 minutah	STV: 20 ppm 15 minuter STV: 90 mg/m ³ 15 minuter LLV: 10 ppm 8 timmar. LLV: 45 mg/m ³ 8 timmar. Skin notation	

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls
Engineering Measures

Ensure adequate ventilation, especially in confined areas

Personal protective equipment
Eye Protection

Goggles

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
Physical State

viscous liquid, Liquid

Appearance

Colorless

odor

odorless

pH

5-8

Boiling Point/Range

245°C / 473°F @ 760 mmHg

Melting Point/Range

-10°C / 14°F

Flash Point

143°C / 289.4°F

Autoignition Temperature

225°C / 437°F

Explosion Limits
Lower

1.8

Upper

12.2

Water Solubility

soluble

Specific Gravity

1.110

Molecular Formula

C4 H10 O3

Molecular Weight

106.12

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SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Hygroscopic.

Possibility of Hazardous Reactions

Hazardous Polymerization No information available.
Hazardous Reactions . No information available.

Conditions to Avoid

Incompatible products, Exposure to moist air or water.

Incompatible Materials

Strong oxidizing agents, Strong acids, Metals.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol	12565 mg/kg (Rat)	11890 mg/kg (Rabbit)	

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization May cause sensitization by inhalation
Mutagenic Effects Not mutagenic in AMES Test
Reproductive Effects No information available.
Developmental Effects No information available.
Target Organs Respiratory system



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Other Adverse Effects See actual entry in RTECS for complete information
Endocrine Disruptor Information None known

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Diethylene glycol		75200 mg/L LC50 96 h	EC50 = 29228 mg/L 15 min	84000 mg/L EC50 = 48 h

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Component	log Pow
Diethylene glycol	-1.98

Mobility in soil

Results of PBT and vPvB assessment

Other adverse effects

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO Not regulated

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SECTION 14. TRANSPORT INFORMATION

ADR Not regulated

IATA Not regulated

SECTION 15. REGULATORY INFORMATION

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

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Diethylene glycol	203-872-2	-		X	X	-	X	X	X	X	X

Legend

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- CHINA** - China Inventory of Existing Chemical Substances
- AICS** - Inventory of Chemical Substances
- KECL** - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

SECTION 16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R22 - Harmful if swallowed

Revision Date 14-Feb-2012
Revision Summary (M)SDS sections updated, 1, 2, 3.
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006



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SECTION 16. OTHER INFORMATION

Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet