

# DIETHYLENE GLYCOL FOR SYNTHESIS

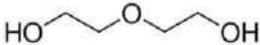
## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
SDS Reference Number: 00105  
Issue date: 7/22/2024 Revision date: 7/22/2026 Supersedes version of: 4/9/2015 Version: 1.0



### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Substance
Trade name	: DIETHYLENE GLYCOL FOR SYNTHESIS
IUPAC name	: 2,2'-Oxydiethanol
EC Index-No.	: 603-140-00-6
EC-No.	: 203-872-2
CAS-No.	: 111-46-6
Product code	: B-00988
Type of product	: glycol
Formula	: C <sub>4</sub> H <sub>10</sub> O <sub>3</sub>
Chemical structure	: 
Synonyms	: Bis(2-hydroxyethyl) ether, Diglycol, Ethylene diglycol, 2-Hydroxyethyl ether

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### Relevant identified uses

Use of the substance/mixture	: Laboratory chemicals, Manufacture of substances
Use of the substance/mixture	: Solvents

#### 1.3. Details of the supplier of the safety data sheet

Bio-Chem Chemicals  
5455, Nicholson Road Science Market,  
Ambala Cantt. 133001 Haryana (India)  
+91-82952 41953  
[info@biofinechemical.com](mailto:info@biofinechemical.com) - [www.biofinechemical.com](http://www.biofinechemical.com)

#### 1.4. Emergency telephone number

Emergency number : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302

Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

Harmful if swallowed.

#### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP)	: Warning
Hazard statements (CLP)	: H302 - Harmful if swallowed.
Precautionary statements (CLP)	: P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
DIETHYLENE GLYCOL	CAS-No.: 111-46-6 EC-No.: 203-872-2 EC Index-No.: 603-140-00-6	100

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.  
First-aid measures after skin contact : Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.  
First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.  
First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. Call a poison center or a doctor if you feel unwell.  
First-aid measures for first aider : First aid workers will be equipped with suitable personal protective equipment.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.  
Symptoms/effects after skin contact : None under normal conditions.  
Symptoms/effects after eye contact : None under normal conditions.  
Symptoms/effects after ingestion : Harmful if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>). Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.  
Explosion hazard : May form flammable/explosive vapour-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form explosive peroxides.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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### 5.3. Advice for firefighters

- Firefighting instructions : DO NOT fight fire when fire reaches explosives. Evacuate area. Do not enter fire area without proper protective equipment, including respiratory protection.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : No open flames. No smoking. Use special care to avoid static electric charges. Remove ignition sources. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

#### For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
- Emergency procedures : Ventilate spillage area.

#### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Hazardous waste due to potential risk of explosion.
- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from sources of ignition - No smoking. No open flames. No smoking.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Keep in fireproof place. Store in original container. Store in a dry place.
- Incompatible products : Oxidizing agent.
- Incompatible materials : Heat sources.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

No additional information available

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

Appropriate engineering controls

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

Personal protection equipment

**Personal protective equipment:**

Wear recommended personal protective equipment.

**Personal protective equipment symbol(s):**



Eye and face protection

**Eye protection:**

Chemical goggles or safety glasses

Skin protection

**Skin and body protection:**

Wear a mask

**Hand protection:**

Protective gloves

Respiratory protection

**Respiratory protection:**

Wear appropriate mask

Environmental exposure controls

**Environmental exposure controls:**

Avoid release to the environment.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Viscous. Clear liquid.
Molecular mass	: 106.12 g/mol
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -10.4 °C
Boiling point	: 244 – 245 °C
Flammability	: Not available
Lower explosion limit	: 1.7 vol %
Upper explosion limit	: 37 vol %
Flash point	: 124 °C
Auto-ignition temperature	: 229 °C
Decomposition temperature	: Not available
pH	: 6 – 8 at 20 °C
pH solution concentration	: 20 %
Viscosity, kinematic	: 0.268 mm <sup>2</sup> /s

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Viscosity, dynamic	: 0.3 cP at 25 °C
Solubility	: Water: Miscible Ethanol: Miscible Ether: Miscible Acetone: Miscible
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 0.04 hPa at 20 °C
Vapour pressure at 50°C	: Not available
Density	: 1.118 g/cm <sup>3</sup> at 20 °C
Relative density	: Not available
Relative vapour density at 20°C	: 3.66 (Air = 1)
Particle characteristics	: Not applicable

### 9.2. Other information

#### Other safety characteristics

Relative evaporation rate (butylacetate=1)	: 37.5
Refractive index	: 1.446 – 1.448 (20 °C, 589 nm)

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and acids.

### 10.4. Conditions to avoid

Heat, Sparks, Open flame, Direct sunlight, Overheating.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

May form explosive peroxides.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified pH: 6 – 8 at 20 °C
Serious eye damage/irritation	: Not classified pH: 6 – 8 at 20 °C
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>DIETHYLENE GLYCOL FOR SYNTHESIS (111-46-6)</b>	
Viscosity, kinematic	0.268 mm <sup>2</sup> /s

### 11.2. Information on other hazards

#### Other information

Potential adverse human health effects and symptoms : Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Not classified

### 12.2. Persistence and degradability

<b>DIETHYLENE GLYCOL FOR SYNTHESIS (111-46-6)</b>	
Persistence and degradability	Rapidly degradable

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Disposal must be done according to official regulations.  
Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations.  
Additional information : Hazardous waste due to potential risk of explosion. Do not re-use empty containers.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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### 14.1. UN number or ID number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated  
Proper Shipping Name (IMDG) : Not regulated  
Proper Shipping Name (IATA) : Not regulated  
Proper Shipping Name (ADN) : Not regulated  
Proper Shipping Name (RID) : Not regulated

### 14.3. Transport hazard class(es)

**ADR**  
Transport hazard class(es) (ADR) : Not regulated

**IMDG**  
Transport hazard class(es) (IMDG) : Not regulated

**IATA**  
Transport hazard class(es) (IATA) : Not regulated

**ADN**  
Transport hazard class(es) (ADN) : Not regulated

**RID**  
Transport hazard class(es) (RID) : Not regulated

### 14.4. Packing group

Packing group (ADR) : Not regulated  
Packing group (IMDG) : Not regulated  
Packing group (IATA) : Not regulated  
Packing group (ADN) : Not regulated  
Packing group (RID) : Not regulated

### 14.5. Environmental hazards

Other information : No supplementary information available

### 14.6. Special precautions for user

**Overland transport**  
Not regulated

**Transport by sea**  
Not regulated

**Air transport**  
Not regulated

**Inland waterway transport**  
Not regulated

**Rail transport**  
Not regulated

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 15: Regulatory information

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

##### EU-Regulations

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	DIETHYLENE GLYCOL FOR SYNTHESIS

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

##### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

##### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

##### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

##### National regulations

###### Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

###### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – : The substance is not listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

###### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Abbreviations and acronyms:</b>	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

<b>Full text of H- and EUH-statements:</b>	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.

# DIETHYLENE GLYCOL FOR SYNTHESIS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.