

SAFETY DATA SHEET

Diethylenglykol (DEG)

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830

Date of issue : 2022-02-21
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Version : 1

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

1.1. Product identifier

Product name : Diethylenglykol
Chemical name : Diethylenglykol
EC number : 203-872-2
CAS number : 111-46-6
INCI Name : Not available/not applicable
REACH Registration number : 01-2119457857-21
Other means of identification : DEG, 2,2'-Oxydiethanol, 2-Hydroxyethyl ether, Bis(2-hydroxyethyl) ether, Diglycol
Chemical formula : C₄H₁₀O₃

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

Application of the substance / the preparation : Industrial use; Cooling agent; Anti-freezing agent; Laboratory chemicals; Intermediate
Uses advised against : No further relevant information available.

1.3. Details of the supplier of the safety data sheet

Name : GLI-THERM Sp. z o.o.
Address : st. Rozwojowa 11, 44-338 Jastrzębie-Zdrój Poland
Regon : 242850136
NIP/Tax No : 6423178990
Telephone : +48 733 525 533
E-mail : sandra.stachowicz@gli therm.eu
Website address : www.glitherm.eu

1.4. Emergency telephone number

National advisory body/Poison Center:

Telephone number : +49 (0) 761 19240 (Vergiftungs-Informationen-Zentrale Freiburg)

Supplier

Telephone number : +48 733 525 533

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute Tox. 4 : H302 Harmful if swallowed.

2.2. Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H 302 Harmful if swallowed.

Precautionary statements

Prevention : P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Response : P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.

Disposal : P501 Dispose contents / container to destinations in accordance with local, regional, national and international regulations.

2.3. Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : No

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : No

Other hazards which do not result in classification : No further relevant information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

CAS No. Description	:	Diethylene glycol
CAS No.	:	111-46-6
EC number:	:	203-872-2
Index number:	:	603-140-00-6

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	:	Take affected persons out of danger area and lay down. In case of irregular breathing or respiratory arrest provide artificial respiration.
Eye contact	:	Rinse opened eye for several minutes under running water. Remove contact lenses, if present and easy to do. Continue rinsing.
Inhalation	:	Supply fresh air.
Skin contact	:	Generally the product does not irritate the skin.
Ingestion	:	Rinse out mouth and then drink plenty of water. If symptoms persist consult doctor. Do NOT induce vomiting.

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

Potential acute health effects

Eye contact	:	No further relevant information available.
Inhalation	:	No further relevant information available.
Skin contact	:	No further relevant information available.
Ingestion	:	.No further relevant information available.

Over-exposure signs/symptoms

Eye contact	:	No further relevant information available.
Inhalation	:	No further relevant information available.
Skin contact	:	No further relevant information available.
Ingestion	:	No further relevant information available.

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

Notes to physician	:	No further relevant information available.
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Specific treatments : No further relevant information

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

Unsuitable extinguishing media : Water with full jet

5.2. Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Formation of toxic gases is possible during heating or in case of fire.

Hazardous combustion products : In case of fire, the following can be released: Carbon monoxide, Carbon dioxide

5.3 Advice for firefighters

Special precautions for fire-fighters : Wear self-contained respiratory protective device.

Additional information : Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Ensure adequate ventilation.

For emergency responders : Wear protective clothing.

6.2. Environmental precautions

Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3. Methods and materials for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.

6.4. Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1. Precautions for safe handling

- Protective measures** : No special measures required.
- Advice on general occupational hygiene** : No special precautions are necessary if used correctly.

7.2. Conditions for safe storage, including any incompatibilities.

- Requirements for storage rooms and tanks** : Store only in the original receptacle.
- Information on joint storage** : Store away from oxidising agents.
- Other information on storage conditions** : Store in cool, dry conditions in well sealed receptacles. Store receptacle in a well ventilated area.

7.3. Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance.

8.1. Control parameters

Ingredients with limit values that require monitoring at the workplace:		
CAS: 111-46-6 Diethylene glycol		
OEL (Ireland) Long-term value: 100 mg/m ³ , 23 ppm		
DNELs		
Dermal	DNEL(long/systemic)	21 mg/kg bw/day (Consumer) 43 mg/kg bw/day (Workers (Industrial/Professional))
Inhalative	DNEL(long/local)	12 mg/m ³ (Consumer) 60 mg/m ³ (Workers (Industrial/Professional))
	DNEL(long/systemic)	12 mg/m ³ (Consumer) 44 mg/m ³ (Workers (Industrial/Professional))
PNECs		

PNEC (aqua)	10 mg/L (freshwater) 1 mg/L (marine water) 10 mg/L (intermittent release)
PNEC(STP)	199,5 mg/L (sewage treatment plant)
PNEC(sediment)	20,9 mg/kg sedi. dw (freshwater) 2,09 mg/kg sedi. dw (marine water)
PNEC(soil)	1,53 mg/kg soil dw (soil)

8.2. Exposure controls

Individual protection measures

- Hygiene measures** : Do not eat, drink, smoke or sniff while working.
Keep away from foodstuffs, beverages and feed.
Do not inhale gases / fumes / aerosols.
The usual precautionary measures are to be adhered to when handling chemicals.
- Eye/face protection** : Tightly sealed goggles
Gauze goggles
EN 166
- Hand protection** : Protective gloves. Only use chemical-protective gloves with CE-labelling of category III.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
DIN EN 374
- Material of gloves** : Butyl rubber, BR (0.6 - 0.8 mm)
Fluorocarbon rubber (Viton)
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- Penetration time of glove material** : ≥ 480 min
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Body protection** : Protective work clothing
- Respiratory protection** : In case of brief exposure or low pollution use respiratory filter device.
In case of intensive or longer exposure use self-contained respiratory protective device.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Fluid
- Color : Colourless
- Odor : Nearly odourless
- Odor threshold : Not determined.

pH	:	Not determined.
Initial boiling point and boiling range	:	244.9 °C
Melting point/freezing point	:	-6.5 °C
Flash point	:	138 °C
Ignition temperature:	:	229 °C
Flammability (solid, gas)	:	Not applicable.
Lower explosive limits	:	1.6 Vol % Not applicable.
Upper explosive limits	:	10.8 Vol % Not applicable.
Vapor pressure	:	0.008 hPa
Vapor density	:	Not determined.
Density at 20 °C	:	1.18 g/cm ³
Relative density	:	Not determined.
Solubility in water at room temperature (g/l)	:	Fully miscible.
Partition coefficient: n-octanol/water	:	-1.98 log Pow
Decomposition temperature	:	Not determined.
Relative gas density	:	Not determined.

9.2. Other information

Explosive properties	:	Product does not present an explosion hazard.
Oxidizing properties	:	No
Additional information	:	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

No further relevant information available.

10.2 Chemical stability

No decomposition if used and stored according to specifications.

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

No further relevant information available.

10.5. Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity. Harmful if swallowed.

Oral : LD50 19600 mg/kg (Rat)
Skin : LD50 13300 mg/kg (Rabbit)
Conclusion/Summary : No additional information.

Skin corrosion/irritation : Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation : Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.
Germ cell mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenic : Based on available data, the classification criteria are not met.
Reproductive toxicity : Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure : Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure : Based on available data, the classification criteria are not met.
Aspiration hazard : Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties : Substance is not listed.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

LC50 (96h) : 75200 mg/L (Fish) (Pimephales promelas)
EC20 (0,5h) : 1995 mg/L (Bacteria) (ISO 8192; activated sludge)
EC50 (96h) : 1300 mg/L (Algae) (Pseudokirchneriella subcapitata)
EC50 (24h) : 10000 mg/L (Daphnia) (Daphnia magna)
EC50 (72h) : 100 mg/L (Algae) (Pseudokirchneriella subcapitata)
NOEC : 8590 mg/L (Daphnia) (Daphnia magna)7d
15380 mg/L (Fish) (Pimephales promelas)7d

12.2 Persistence and degradability

90 - 100% (28d, OECD 301 B)

12.3 Bioaccumulative potential

100 BCF (Leuciscus idus)

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT : According to the results of its assessment, this substance is not a PBT
vPvB : According to the results of its assessment, this substance is not a vPvB.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods**Product**

Methods of disposal : Must be specially treated adhering to official regulations.

Packaging

Methods of disposal : Disposal must be made according to official regulations..

Recommended cleansing agents: : Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN number

Void

14.2 UN proper shipping name

Void

14.3 Transport hazard class(es)

Void

14.4 Packing group

Void

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Directive 2012/18/EU**

Named dangerous substances - ANNEX I Substance is not listed.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II Substance is not listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3)) Substance is not listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.

Regulation (EC) No 273/2004 on drug precursors Substance is not listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community

and third countries in drug precursors. Substance is not listed.

National regulations:

Other regulations, limitations and prohibitive regulations

RoHS EU Directive 2002/95/EC

This product does not intentionally contain any of the restricted compounds under the RoHS directive.

15.2 Chemical Safety Assessment:

A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

The data is confirmed based on the state of our knowledge, but does not determine how the production properties and cannot be used to justify legally binding contracts.

Abbreviations and acronyms

REACH	:	Registration, Evaluation, Authorisation and Restriction of Chemical
MARPOL	:	(from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships
IBC Code	:	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
UN	:	United Nations (also UNO: United Nations Organization)
NOEC	:	No Observed Effect Concentration
OECD	:	Organization for Economic Co-operation and Development
ASTM	:	American Society for Testing and Materials
WAF	:	Water Accommodated Fraction
ADR	:	Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG	:	International Maritime Code for Dangerous Goods
IATA	:	International Air Transport Association
GHS	:	Globally Harmonised System of Classification and Labeling of Chemicals
EINECS	:	European Inventory of Existing Commercial Chemical Substances
CAS	:	Chemical Abstracts Service (division of the American Chemical Society)
DNEL	:	Derived No-Effect Level (REACH)
PNEC	:	Predicted No-Effect Concentration (REACH)
LC50	:	Lethal concentration, 50 percent
LD50	:	Lethal dose, 50 percent
PBT	:	Persistent, Bioaccumulative and Toxic
vPvB	:	very Persistent and very Bioaccumulative
Acute Tox, 4	:	Acute toxicity - Category 4
Notice to reader	:	The information contained herein is accurate to the latest knowledge and describes the product from the point of view of help and environmental protection as well as safe handling. The information presented in this SDS refers to the technical product only and will not apply to any processed product. Final determination of the suitability of any materials for the chosen application(s) is the sole responsibility of the user"