

**Trade name:** Triethylene glycol (TEG)**Current version :** 2.1.0, issued: 08.05.2023**Replaced version:** 2.0.1, issued: 27.10.2022**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****Triethylene glycol (TEG)**

Substance name 2,2'-(ethylenedioxy)diethanol  
REACH registration no. 01-2119438366-35-0017

**Identification numbers**

CAS no. 112-27-6  
EC no. 203-953-2

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

i.e. as raw material for antifreeze products, cosmetics, plastics additives, softening agents, heat transfer fluids, gas scrubbing, industrial uses, absorbents, printing ink additives, printing inks, hydraulic fluids and additives, refrigeration oil as well as solvents,  
as additive for lubricants or as lubricant.

**Uses advised against**

None known

**1.3 Details of the supplier of the safety data sheet****Address**

LIQUICHEM Handelsgesellschaft mbH  
Kajen 6 – 8  
D-20459 Hamburg

Telephone no. 040 89 97 89 0  
Fax no. 040 89 97 89 9  
e-mail hamburg@liquichem.de

**Advice on Safety Data Sheet**

sdb\_info@umco.de

**1.4 Emergency telephone number**

For medical advice (in German and English):  
+49 (0)551 192 40 (Giftinformationszentrum Nord)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification information**

This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).

**2.2 Label elements**

Not relevant

**2.3 Other hazards**

No data available.

**SECTION 3: Composition/information on ingredients****3.1 Substances****Chemical characterization**

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**3.2 Mixtures**

Not applicable. The product is not a mixture.

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General information**

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes and launder thoroughly before reusing.

**After inhalation**

In the event of symptoms take medical treatment. Ensure supply of fresh air.

**After skin contact**

In case of contact with skin wash off immediately with soap and water.

**After eye contact**

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Seek medical assistance.

**After ingestion**

Seek medical attention. Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person.

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

No data available.

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

No data available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media**

Water spray jet; Carbon dioxide; Extinguishing powder; Foam

**Unsuitable extinguishing media**

No data available.

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

In the event of fire, the following can be released: Carbon dioxide (CO<sub>2</sub>); Carbon monoxide (CO); carbonyl compounds

### 5.3 Advice for firefighters

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus. Wear protective clothing.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.

**For emergency responders**

No data available. Personal protective equipment (PPE) - see Section 8.

### 6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

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

Pick up with absorbent material. When collected, handle material as described under the section heading "Disposal considerations".

### 6.4 Reference to other sections

No data available.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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**Advice on safe handling**

Provide good ventilation at the work area (local exhaust ventilation, if necessary). Avoid formation of aerosols.

**General protective and hygiene measures**

Do not eat, drink or smoke during work time. Wash hands before breaks and after work. Do not inhale vapours. Avoid contact with eyes and skin.

**Advice on protection against fire and explosion**

Vapours can form an explosive mixture with air. Keep away from sources of ignition - refrain from smoking.

**7.2 Conditions for safe storage, including any incompatibilities**
**Technical measures and storage conditions**

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

**Recommended storage temperature**

Value	<	40	°C
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**Storage stability**

Value	12	months
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**Requirements for storage rooms and vessels**

Keep container tightly closed.

**Incompatible products**

Do not store together with oxidizing agents.

**7.3 Specific end use(s)**

No data available.

**SECTION 8: Exposure controls/personal protection**
**8.1 Control parameters**

No parameters available for monitoring.

**8.2 Exposure controls**
**Appropriate engineering controls**

No data available.

**Personal protective equipment**
**Respiratory protection**

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified. Gas filter for organic gases/vapours (boiling point > 65 °C, e.g. EN 14387 type A)

**Eye / face protection**

Safety glasses (EN 166)

**Hand protection**

Protective gloves (EN 374); Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material	nitrile rubber		
Material thickness		0.4	mm
Appropriate Material	chloroprene		
Material thickness		0.5	mm
Appropriate Material	butyl rubber		
Material thickness		0.7	mm
Breakthrough time	>	480	min

**Other**

Normal chemical work clothing. Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

**Environmental exposure controls**

No data available.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>State of aggregation</b>	
liquid	
<b>Form</b>	
liquid	
<b>Colour</b>	
colourless	
<b>Odour</b>	
almost odourless	
<b>pH value</b>	
No data available	
<b>Boiling point / boiling range</b>	
Value	286.5 °C
<b>Melting point/freezing point</b>	
Value	-7 °C
<b>Decomposition temperature</b>	
No data available	
<b>Flash point</b>	
Value	176 °C
<b>Ignition temperature</b>	
No data available	
<b>Auto-ignition temperature</b>	
Value	347 °C
<b>Flammability</b>	
No data available	
<b>Lower explosion limit</b>	
No data available	
<b>Upper explosion limit</b>	
No data available	
<b>Vapour pressure</b>	
Value	0.0006 hPa
	55
Reference temperature	24.7 °C
<b>Relative vapour density</b>	
No data available	
<b>Relative density</b>	
No data available	
<b>Density</b>	
Value	1.13 g/cm <sup>3</sup>
Reference temperature	15 °C
<b>Solubility in water</b>	
Comments	miscible
<b>Solubility</b>	
No data available	
<b>Partition coefficient n-octanol/water (log value)</b>	

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1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
log Pow		-1.75	
Reference temperature		25	°C
Source		CSR	

Kinematic viscosity			
Value		47.8	mPa*s
Reference temperature		20	°C

Particle characteristics			
No data available			

## 9.2 Other information

Other information			
No data available.			

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available.

### 10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

### 10.3 Possibility of hazardous reactions

Decomposition at higher temperatures is possible.

### 10.4 Conditions to avoid

Temperatures &gt; 40°C; Protect against humidity. Protect from light.

### 10.5 Incompatible materials

Oxidizing agents

### 10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide; Toxic gases/vapours; carbonyl compounds

## SECTION 11: Toxicological information

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

Acute oral toxicity			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
LD50		>	2000 mg/kg bodyweight
Species		rat	
Source		CSR	

Acute dermal toxicity			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
LD50		>	2000 mg/kg bodyweight
Species		rabbit	
Source		CSR	

Acute inhalational toxicity			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
LC50		>	5.2 mg/l
Duration of exposure		4 h	
State of aggregation		Dust/mist	
Species		rat	
Source		CSR	

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Skin corrosion/irritation			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Species		rabbit	
Source		CSR	
Evaluation		non-irritant	

Serious eye damage/irritation			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Species		rabbit	
Source		CSR	
Evaluation		non-irritant	

Respiratory or skin sensitisation			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Route of exposure		Skin	
Species		guinea pig	
Source		CSR	
Evaluation		non-sensitizing	

Germ cell mutagenicity			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Source		CSR	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Reproduction toxicity			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Source		CSR	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Carcinogenicity			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Source		CSR	
Evaluation/classification		Based on available data, the classification criteria are not met.	

STOT - single exposure			
No data available			

STOT - repeated exposure			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Route of exposure		oral	
Species		rat	
Method		OECD 408	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Route of exposure		inhalational	
Species		mouse	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Aspiration hazard			
No data available			

## 11.2 Information on other hazards

### Endocrine disrupting properties

No data available.

### Other information

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No data available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
LC50		69800	mg/l
Duration of exposure		96	h
Species	Pimephales promelas		
Source	CSR		

Toxicity to fish (chronic)			
No data available			

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
EC50		>	10000 mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Source	CSR		

Toxicity to Daphnia (chronic)			
No data available			

Toxicity to algae (acute)			
No data available			

Toxicity to algae (chronic)			
No data available			

Bacteria toxicity			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
EC10		>	1995 mg/l
Duration of exposure		30	min
Species	activated sludge		
Source	CSR		

### 12.2 Persistence and degradability

Biodegradability			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
Source	CSR		
Evaluation	readily biodegradable		

### 12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2
log Pow		-1.75	
Reference temperature		25	°C
Source	CSR		

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

No data available.

### 12.6 Endocrine disrupting properties

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No data available.

#### 12.7 Other adverse effects

No data available.

#### 12.8 Other information

##### Other information

Do not discharge product unmonitored into the environment.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

##### Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

### SECTION 14: Transport information

#### 14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

#### 14.2 Transport IMDG

The product is not subject to IMDG regulations.

#### 14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

#### 14.4 Other information

No data available.

#### 14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

#### 14.6 Special precautions for user

No data available.

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

Not relevant

### SECTION 15: Regulatory information

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

##### EU regulations

##### Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

##### REACH candidate list of substances of very high concern (SVHC) for authorisation

In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

##### Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.

##### Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This substance is not subject to Part 1 or 2 of Annex I

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## 15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance.

## SECTION 16: Other information

### Further information

Authors responsible for the compilation of the material safety data sheet: UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de.

The information is based on our current knowledge however it does not represent a guarantee of product properties nor does it create any legal obligation.

### Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

### Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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