

# SAFETY DATA SHEET

Version 6.8  
Revision Date 09/08/2024  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Tetraethylene glycol

Product Number : 110175  
Brand : Aldrich  
CAS-No. : 112-60-7

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

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

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES  
Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

### 2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

Aldrich - 110175

Page 1 of 10

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Bis[2-(2-hydroxyethoxy)ethyl] ether  
Tetra(ethylene glycol)  
Tetraglycol

Formula : C<sub>8</sub>H<sub>18</sub>O<sub>5</sub>  
Molecular weight : 194.23 g/mol  
CAS-No. : 112-60-7  
EC-No. : 203-989-9

No components need to be disclosed according to the applicable regulations.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

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

Carbon oxides

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

### 5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

### 5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.  
For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb® ). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

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

#### Storage conditions

Tightly closed.

Store under inert gas.

#### Storage class

Storage class (TRGS 510): 10: Combustible liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

## 8.2 Exposure controls

### Appropriate engineering controls

Change contaminated clothing. Wash hands after working with substance.

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Respiratory protection

Not required; except in case of aerosol formation.

#### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                   |   |
|-------------------|---|
| a) Appearance     | Form: clear, viscous liquid<br>Color: colorless |
| b) Odor           | No data available                               |
| c) Odor Threshold | No data available                               |
| d) pH             | No data available                               |

e) Melting point/freezing point	Melting point/ range: -5.6 °C (21.9 °F) - lit.
f) Initial boiling point and boiling range	314 °C 597 °F - lit.
g) Flash point	182 °C (360 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	< 0.01 hPa at 20 °C (68 °F)
l) Vapor density	6.71 - (Air = 1.0)
m) Density	1.125 g/cm <sup>3</sup> at 25 °C (77 °F) - lit.
Relative density	No data available
n) Water solubility	1,000 g/l at 25 °C (77 °F) - soluble
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	349 °C (660 °F)
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

Relative vapor density	6.71 - (Air = 1.0)
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Forms explosive mixtures with air on intense heating.  
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

No data available

#### 10.4 Conditions to avoid

Strong heating.

#### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases

#### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

LD50 Oral - Rat - male and female - > 18,000 mg/kg  
(EC Directive 92/69/EEC B.1 Acute Toxicity (Oral))

Remarks: (ECHA)

Inhalation: No data available

LD50 Dermal - Rabbit - male and female - > 18,000 mg/kg  
(OECD Test Guideline 402)

##### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

##### Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation - 24 h

(OECD Test Guideline 405)

##### Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

##### Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: US-EPA

Result: negative

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: US-EPA

Result: Positive results were obtained in some in vitro tests.

Test Type: Chromosome aberration test

Species: Rat

Cell type: Bone marrow

Application Route: Oral

Method: OECD Test Guideline 475

Result: negative

Aldrich - 110175

Page 6 of 10

## Carcinogenicity

- IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

## Reproductive toxicity

No data available

## Specific target organ toxicity - single exposure

No data available

## Specific target organ toxicity - repeated exposure

No data available

## Aspiration hazard

No data available

## 11.2 Additional Information

RTECS: XC2100000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - > 10,000 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 7,746 mg/l - 48 h (US-EPA)
Toxicity to bacteria	EC20 - activated sludge - > 100 mg/l - 0.5 h Remarks: (ECHA)

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 20 d  
Result: 90 - 100 % - Readily biodegradable.  
(OECD Test Guideline 301A)

### 12.3 Bioaccumulative potential

No data available

Aldrich - 110175

Page 7 of 10

#### **12.4 Mobility in soil**

No data available

#### **12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### **12.6 Endocrine disrupting properties**

No data available

#### **12.7 Other adverse effects**

Discharge into the environment must be avoided.

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### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

##### **Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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### **SECTION 14: Transport information**

#### **DOT (US)**

Not dangerous goods

#### **IMDG**

Not dangerous goods

#### **IATA**

Not dangerous goods

#### **Further information**

Not classified as dangerous in the meaning of transport regulations.

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### **SECTION 15: Regulatory information**

#### **CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

#### **SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.



## SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
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**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### US State Regulations

#### Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know

tetraethylene glycol 112-60-7

#### New Jersey Right To Know

tetraethylene glycol 112-60-7

#### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

#### The ingredients of this product are reported in the following inventories:

TSCA : On TSCA Inventory

#### TSCA list

Not relevant

Not relevant

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## SECTION 16: Other information

### Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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