

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 24 Apr 2024

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

### 1.1. Product name:

Tetraethylene glycol dimethyl ether

### 1.1. Catalog No.:

682591

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Reproductive toxicity, (Category  
1B)  
H360FD: May damage fertility. May  
damage the unborn child.

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2 Label elements  
Labeling according Regulation (EC) No 1272/2008  
Signal Word Danger  
Hazard Statements

H360FD May damage fertility. May damage the unborn child.

Precautionary Statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard information (EU)

EUH019 May form explosive peroxides.

Restricted to professional users.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Synonyms : Dimethoxytetraethylene glycol

Tetraglyme

Dimethyltetraglycol

Bis[2-(2-methoxyethoxy)ethyl] ether

2,5,8,11,14-Pentaoxapentadecane

EC-No. : 205-594-7

Bis(2-(2-methoxyethoxy)ethyl) ether Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

Repr. 1B; H360FD

<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 3.1.1. Formula

C10H22O5

#### 3.1.2. Molecular Weight (g/mol)

222.28

### 3.1.3. CAS-No.

143-24-8

## 4. FIRST AID MEASURES

### 4.1 Description of first-aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

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

#### In case of eye contact

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

#### If swallowed

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

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

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

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

No data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

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

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

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

## 6. ACCIDENTAL RELEASE MEASURES

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. 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 carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

#### 6.4 Reference to other sections

For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

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

Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Air sensitive. Forms explosive peroxides on prolonged storage May form peroxides on contact with air. Test for peroxide formation periodically and before distillation.

Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

### 7.3 Specific end use(s)

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Ingredients with workplace control parameters

### 8.2 Exposure controls

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 gloves 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.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 240 min

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.

Body Protection

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Physical state liquid, clear

b) Color colorless

c) Odor No data available

d) Melting

point/freezing point

Melting point/range: -30 °C - lit.

e) Initial boiling point

and boiling range

275 - 276 °C - lit.

f) Flammability (solid,  
gas)

No data available

g) Upper/lower

flammability or

explosive limits

No data available

h) Flash point 136 °C - closed cup - Regulation (EC) No. 440/2008, Annex, A.9

i) Autoignition

temperature

270 °C

at 1.016 hPa

j) Decomposition

temperature

No data available

k) pH No data available

l) Viscosity Viscosity, kinematic: 3,69 mm<sup>2</sup>/s at 20 °C - OECD Test

Guideline 114 2,39 mm<sup>2</sup>/s at 40 °C - OECD Test Guideline 114

Viscosity, dynamic: 2,37 mPa.s at 40 °C 3,73 mPa.s at 20 °C

m) Water solubility 1.000 g/l at 20 °C - OECD Test Guideline 105- soluble

n) Partition coefficient:

n-octanol/water

log Pow: -0,84 at 23 °C - OECD Test Guideline 107 -

Bioaccumulation is not expected.

o) Vapor pressure 0,0025 hPa at 25 °C - OECD Test Guideline 104

p) Density 1,009 g/mL at 25 °C - lit.

Relative density No data available

q) Relative vapor

density

No data available

r) Particle

characteristics

No data available

s) Explosive properties No data available

t) Oxidizing properties none

9.2 Other safety information

Surface tension 66,7 mN/m at 1g/l at 20 °C

- OECD Test Guideline 115

Relative vapor

density

7,67 - (Air = 1.0)

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Forms explosive mixtures with air on intense heating. Formation of peroxides possible.  
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) .  
Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Reacts with air to form peroxides.

### 10.4 Conditions to avoid

Strong heating.

Moisture.

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

Peroxides

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - 3.640 - 4.160 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rat - male - > 6.900 mg/kg

(OECD Test Guideline 402)

Remarks: (in analogy to similar products)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child.

May damage fertility.

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

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain  
components considered to have endocrine

disrupting properties according to REACH Article

57(f) or Commission Delegated regulation (EU)

2017/2100 or Commission Regulation (EU)

2018/605 at levels of 0.1% or higher.

RTECS: SB0400000

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

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 5.000 mg/l - 96 h  
(OECD Test Guideline 203)

Toxicity to daphnia  
and other aquatic  
invertebrates

static test EC50 - Daphnia magna (Water flea) - 7.467 mg/l - 48 h  
(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) -  
8.996 mg/l - 72 h

(OECD Test Guideline 201)

Remarks: (ECHA)

Toxicity to bacteria static test NOEC - activated sludge - >= 5.000 mg/l - 3 h  
(OECD Test Guideline 209)

Remarks: The value is given in analogy to the following substances:

Tegdme

Toxicity to daphnia  
and other aquatic  
invertebrates(Chronic  
toxicity)

semi-static test NOEC - Daphnia magna (Water flea) - 320 mg/l - 21  
d

(OECD Test Guideline 211)

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 36 d

Result: 99 % - Inherently biodegradable.

(OECD Test Guideline 302B)

Chemical Oxygen

Demand (COD)

1.800.000 mg/g

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent,  
bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at  
levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components  
considered to have endocrine disrupting properties

according to REACH Article 57(f) or Commission

Delegated regulation (EU) 2017/2100 or Commission

Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

No data available

## 14. TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: - IMDG: - IATA: -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods  
IATA: Not dangerous goods  
14.3 Transport hazard class(es)  
ADR/RID: - IMDG: - IATA: -  
14.4 Packaging group  
ADR/RID: - IMDG: - IATA: -  
14.5 Environmental hazards  
ADR/RID: no IMDG Marine pollutant: no IATA: no  
14.6 Special precautions for user  
No data available  
Further information  
Not classified as dangerous in the meaning of transport regulations.

## 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.  
Authorisations and/or restrictions on use  
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).  
: Bis(2-(2-methoxyethoxy)ethyl) ether  
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)  
: Bis(2-(2-methoxyethoxy)ethyl) ether  
Other regulations  
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.  
Take note of Dir 94/33/EC on the protection of young people at work.  
15.2 Chemical Safety Assessment  
For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.  
The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!