

Chemical Safety Data Sheet MSDS / SDS

2-(2-(2-butoxyethoxy)ethoxy)ethanol SDS

Revision Date:2024-04-25 Revision Number:1

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product identifier**

Product name: 2-(2-(2-butoxyethoxy)ethoxy)ethanol

CAS: 143-22-6

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.

Uses advised against: none

Company Identification

Company: Chemicalbook.in

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

Serious eye damage, Category 1

GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

Hazard statement(s)

H318 Causes serious eye damage

Precautionary statement(s)

Prevention

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

Response

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

Storage

none

Disposal

none

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name: 2-(2-(2-butoxyethoxy)ethoxy)ethanol

Common names and synonyms: 2-(2-(2-butoxyethoxy)ethoxy)ethanol

CAS number: 143-22-6
EC number: 205-592-6
Concentration: 100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Rinse skin with plenty of water or shower.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth.

Most important symptoms/effects, acute and delayed

no data available

Indication of immediate medical attention and special treatment needed, if necessary

Absorption, Distribution and Excretion

Human abdominal whole skin (2.54 cm sq) was mounted in a glass diffusion apparatus (at 30 +/- 1 degree C) and the diffusion of triethylene glycol monobutyl ether was monitored during a 12-hr period using gas chromatography (n=6). The integrity of the epidermal membranes was first assessed by measuring permeability of membranes to tritiated water. Epidermal membranes displaying permeability constants greater than $1.5 \times 10E-3$ cm/hr were deemed to have been damaged during preparation and were rejected. The mean steady state of absorption for triethylene glycol monobutyl ether was 22.2 ug/cm sq/hr (SD +/- 8.59), which was 100-fold less than that of ethylene glycol monomethyl ether. Test material did not increase permeability of the membrane (damage ratio of 1.26).

SECTION 5: Firefighting measures

Suitable extinguishing media

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

Specific hazards arising from the chemical

Combustible.

Special protective actions for fire-fighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.
Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.

Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.
Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage

Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety goggles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Liquid.
Colour:	Colourless.
Odour:	Mild smelling
Melting point/freezing point:	-35.2 °C. Atm. press.:1 atm.
Boiling point or initial boiling point and boiling range:	278 °C. Atm. press.:1 atm.
Flammability:	Combustible.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	131 °C. Atm. press.:1 013.25 hPa.
Auto-ignition temperature:	202 °C. Atm. press.:1 013.25 hPa.
Decomposition temperature:	no data available
pH:	7. Remarks:7; neutral.
Kinematic viscosity:	kinematic viscosity (in mm ² /s) = 9.2. Temperature:25.0°C. Remarks:Equivalent to a dynamic viscosity of 9.1 mPas.
Solubility:	Very soluble in ethanol, methanol
Partition coefficient n-octanol/water:	log Pow = 0.51. Temperature:25 °C.
Vapour pressure:	0.003 mm Hg. Temperature:25 °C. Remarks:Experimentally derived value.;0.001 mm Hg. Temperature:25 °C. Remarks:Value from a QSAR.
Density and/or relative density:	Ca. 989 kg/m ³ . Temperature:20 °C.
Relative vapour density:	no data available

Particle
characteristics:

no data available

SECTION 10: Stability and reactivity

Reactivity

no data available

Chemical stability

no data available

Possibility of hazardous reactions

Combustible

Conditions to avoid

no data available

Incompatible materials

Glycol ethers, glycols, ketones, and alcohols undergo violent decomposition in contact with 68-72% perchloric acid

Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 - rat (male/female) - 5 170 mg/kg bw.

Inhalation: LCLo - rat (male/female) - 1 200 mg/m³ air.

Dermal: LD50 - rabbit (male) - 3 540 mg/kg bw.

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

The substance is irritating to the eyes. The substance is mildly irritating to the skin.

STOT-repeated exposure

The substance defats the skin, which may cause dryness or cracking.

Aspiration hazard

A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: LC50 - Leuciscus idus - 2 200 - 4 600 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna - 2 210 mg/L - 48 h.

Toxicity to algae: EC10 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 612.6 mg/L - 72 h.

Toxicity to microorganisms: Toxicity threshold (TT) or EC3 or (-NOEC) - Pseudomonas putida - 1 221 mg/L - 16 h.

Persistence and degradability

AEROBIC: The theoretical BODs for triethylene glycol monobutyl ether are 0, 5, and 24% for 5 days, 10 days, and 20 days, respectively, indicating that it will be partially removed from biological wastewater treatment plants(1).

Bioaccumulative potential

An estimated BCF of 3 was calculated in fish for triethylene glycol monobutyl ether(SRC), using an estimated log Kow of 0.02(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of triethylene glycol monobutyl ether can be estimated to be 10(SRC). According to a classification scheme(2), this estimated Koc value suggests that triethylene glycol monobutyl ether is expected to have very high mobility in soil(SRC).

Other adverse effects

no data available

SECTION 13: Disposal considerations

Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:
http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Disclaimer: 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. We as supplier shall not be held liable for any