

## Chemical Safety Data Sheet MSDS / SDS

## 1,2-dibutoxyethane 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: 1,2-dibutoxyethane

CAS: 112-48-1

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

Relevant identified uses: For R&amp;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**

Eye irritation, Category 2

## GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

Hazard statement(s)

H319 Causes serious eye irritation

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.

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

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

none

Disposal

none

Other hazards which do not result in classification

no data available

## SECTION 3: Composition/information on ingredients

Substance

Chemical name: 1,2-dibutoxyethane

Common names and synonyms: 1,2-dibutoxyethane

CAS number: 112-48-1  
EC number: 203-976-8  
Concentration: 100%

#### **SECTION 4: First aid measures**

##### **Description of necessary first-aid measures**

###### **If inhaled**

Fresh air, rest.

###### **Following skin contact**

Remove contaminated clothes. 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**

Moderately toxic by ingestion and skin contact. Irritates skin and eyes. (USCG, 1999)

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

no data available

#### **SECTION 5: Firefighting measures**

##### **Suitable extinguishing media**

Fire Extinguishing Agents Not to Be Used: Water may be ineffective. Fire Extinguishing Agents: Dry chemical, alcohol foam, carbon dioxide. (USCG, 1999)

##### **Specific hazards arising from the chemical**

Special Hazards of Combustion Products: On decomposition, it emits acrid smoke and irritating fumes. (USCG, 1999)

#### **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**

Collect leaking liquid in sealable containers. Wash away remainder with plenty of water.

#### **Environmental precautions**

Collect leaking liquid in sealable containers. 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. Above 85°C use a closed system and ventilation. 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**

Separated from strong oxidants. Ventilation along the floor.

### **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 spectacles.

#### **Skin protection**

Protective gloves.

#### **Respiratory protection**

Use ventilation.

#### **Thermal hazards**

no data available

## **SECTION 9: Physical and chemical properties and safety characteristics**

Physical state:	Ethylene glycol dibutyl ether is a colorless liquid. (USCG, 1999)
Colour:	Almost colorless liquid
Odour:	Slight odor
Melting point/freezing point:	-69.1°C

Boiling point or initial boiling point and boiling range:	203.6 °C
Flammability:	Combustible.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	85 °C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	In water, 2.0X10+3 mg/L at 20 deg C
Partition coefficient n-octanol/water:	log Kow = 2.48
Vapour pressure:	0.38mmHg at 25 °C
Density and/or relative density:	0.84 g/cm <sup>3</sup>
Relative vapour density:	(air = 1): 6
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

The substance can presumably form explosive peroxides. Reacts with strong oxidants.

**Chemical stability**

no data available

**Possibility of hazardous reactions**

Combustible ETHYLENE GLYCOL DIBUTYL ETHER may react violently with strong oxidizing agents. May generate flammable and/or toxic gases with alkali metals, nitrides, and other strong reducing agents. May initiate the polymerization of isocyanates and epoxides. Relatively inert in other reactions, which typically involve the breaking of the carbon-oxygen bond.

**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 oral 3250 mg/kg

Inhalation: no data available

Dermal: no data available

**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 mildly irritating to the eyes and skin.

**STOT-repeated exposure**

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

**Aspiration hazard**

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available



### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

An estimated BCF of 16 was calculated in fish for ethylene glycol dibutyl ether(SRC), using a log Kow of 2.48(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 ethylene glycol dibutyl ether can be estimated to be 17(SRC). According to a classification scheme(2), this estimated Koc value suggests that ethylene glycol dibutyl 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: no data available

IMDG: no data available  
IATA: no data available

**UN Proper Shipping Name**

ADR/RID: no data available  
IMDG: no data available  
IATA: no data available

**Transport hazard class(es)**

ADR/RID: no data available  
IMDG: no data available  
IATA: no data available

**Packing group, if applicable**

ADR/RID: no data available  
IMDG: no data available  
IATA: no data available

**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**

Not Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Not Listed.

**(PICCS)**

Not 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](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/>

### Other Information

Health effects of exposure to the substance have not been investigated adequately. Check for peroxides prior to distillation; eliminate if found.

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