

## Chemical Safety Data Sheet MSDS / SDS

## Ethylene Glycol Dibutyl Ether

Revision Date:2025-01-11 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier**

Product name : Ethylene Glycol Dibutyl Ether  
CBnumber : CB6300645  
CAS : 112-48-1  
EINECS Number : 203-976-8  
Synonyms : ethylene glycol di-n-butyl ether, ethylene Glycol Dibutyl Ether

**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  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

**Classification of the substance or mixture**

Eye irritation, Category 2

**Label elements****Pictogram(s)**

□

Signal word : Warning

**Hazard statement(s)**

H227 Combustible liquid

H320 Causes eye irritation

**Precautionary statement(s)**

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P264 Wash hands thoroughly after handling.

P264 Wash skin thoroughly after handling.

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

P370+P378 In case of fire: Use ... for extinction.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container to.....

#### **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**

no data available

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: Ethylene Glycol Dibutyl Ether
Synonyms	: ethylene glycol di-n-butyl ether, ethylene Glycol Dibutyl Ether
CAS	: 112-48-1
EC number	: 203-976-8
MF	: C <sub>10</sub> H <sub>22</sub> O <sub>2</sub>
MW	: 174.28

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## SECTION 4: First aid measures

### **Description of 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 and effects, both acute and delayed**

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

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

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## SECTION 5: Firefighting measures

### Extinguishing media

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

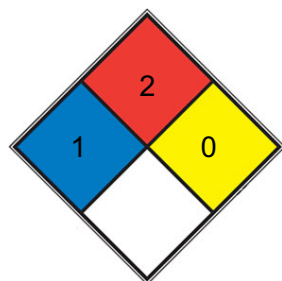
### Specific Hazards Arising from the Chemical

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

### Advice for firefighters

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

### NFPA 704



**HEALTH** 1 Exposure would cause irritation with only minor residual injury (e.g. [acetone](#), sodium bromate, potassium chloride)

Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely

**FIRE** 2 divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

**REACT** 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

**SPEC.**

**HAZ.**

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## 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.

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## 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.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

no data available

#### Biological limit values

no data available

### Exposure 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

#### Eye/face protection

Wear safety spectacles.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use ventilation.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

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	203.6°C

boiling range	
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.

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## 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).

### **Toxics Screening Level**

The initial threshold screening level (ITSL) for ethylene glycol dibutyl ether is 10 µg/m<sup>3</sup> based on an annual averaging time.

### **Other adverse effects**

no data available

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## 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.

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## 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

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## 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.

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## 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?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=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 information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.