

## Chemical Safety Data Sheet MSDS / SDS

## Diethylene glycol monobutyl ether

Revision Date:2025-02-01 Revision Number:1

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

**Product identifier**

Product name : Diethylene glycol monobutyl ether  
CBnumber : CB5852864  
CAS : 112-34-5  
EINECS Number : 203-961-6  
Synonyms : Butyldiglycol, butyl carbitol

**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

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## SECTION 2: Hazards identification

**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

**Precautionary statements**

P264 Wash hands thoroughly after handling.

P264 Wash skin thoroughly after handling.

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

Continuerinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

**Hazard statements**

H319 Causes serious eye irritation

## SECTION 3: Composition/information on ingredients

## Substance

Product name	: Diethylene glycol monobutyl ether
Synonyms	: Butyldiglycol, butyl carbitol
CAS	: 112-34-5
EC number	: 203-961-6
MF	: C8H18O3
MW	: 162.23

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## SECTION 4: First aid measures

### Description of first aid measures

#### General advice

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

#### 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. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### 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

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

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 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.

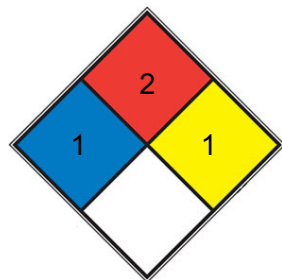
### Advice for firefighters

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

## Further information

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

## 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** 1 Normally stable, but can become unstable at elevated temperatures and pressures (e.g. [propene](#))

SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### 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.

### Environmental precautions

Do not let product enter drains.

### 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.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### Precautions for safe handling

For precautions see section 2.2.

### Conditions for safe storage, including any incompatibilities

## Storage conditions

Tightly closed.

## 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

## control parameter

### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

## 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

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Latex gloves

Minimum layer thickness: 0,6 mm Break through time: 480 min

Material tested:Lapren? (KCL 706 / Aldrich Z677558, Size M)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact Material: Chloroprene

Minimum layer thickness: 0,65 mm Break through time: 240 min Material tested:KCL 720 Camapren?

#### Body Protection

protective clothing

#### Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

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.

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# SECTION 9: Physical and chemical properties

## Information on basic physicochemical properties

Appearance	clear, colorless liquid
Odour	very faint, characteristic
Odour Threshold	No data available
pH	7 at 20 °C neutral
Melting point/freezing point	Melting point/range: -68 °C - lit.
Initial boiling point and boiling range	231 °C - lit.
Flash point	99 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Upper explosion limit: 6,2 %(V) 5,9 %(V) Lower explosion limit: 0,9 %(V)
Vapour pressure	40 hPa at 130 °C
Vapour density	5,6 - (Air = 1.0)
Relative density	0,967 g/cm <sup>3</sup> at 25 °C - lit. No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	log Pow: 1 at 20 °C - Bioaccumulation is not expected.
Autoignition temperature	210 °C at 1.013 hPa - DIN 51794
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 6,49 mPa.s at 20 °C
Explosive properties	No data available
Oxidizing properties	No data available

## Other safety information

Relative vapor density

5,6 - (Air = 1.0)

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## SECTION 10: Stability and reactivity

### 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.

### Chemical stability

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

### Possibility of hazardous reactions

No data available

### Conditions to avoid

May form peroxides of unknown stability. Strong heating.

## Incompatible materials

Strong oxidizing agents, Light metals, Aluminum

## Hazardous decomposition products

Peroxides

In the event of fire: see section 5

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# SECTION 11: Toxicological information

## Information on toxicological effects

### Acute toxicity

LD50 Oral - Mouse - male - 2.410 mg/kg

(OECD Test Guideline 401)

Symptoms: Nausea, Diarrhea, Shortness of breath Symptoms: Possible damages:, mucosal irritations LD50 Dermal - Rabbit - male - 2.764 mg/kg (OECD Test Guideline 402)

### Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation - 1 h (OECD Test Guideline 404)

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye irritation. - 72 h (OECD Test Guideline 405)

(Regulation (EC) No 1272/2008, Annex VI)

### Respiratory or skin sensitization

(OECD Test Guideline 406)

### Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: negative

Test Type: In vivo micronucleus test Species: Mouse

Cell type: Red blood cells (erythrocytes) Application Route: Oral

Method: OECD Test Guideline 475 Result: negative

### Carcinogenicity

No data available

### 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

**Toxicity**

LD50 orally in rats, guinea pigs: 6.56, 2.00 g/kg (Smyth)

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## SECTION 12: Ecological information

**Toxicity****Toxicity to fish**

static test LC50 - *Lepomis macrochirus* (Bluegill sunfish) - 1.300 mg/l

- 96 h

(OECD Test Guideline 203)

**Toxicity to daphnia and other aquatic invertebrates**

static test EC50 - *Daphnia magna* (Water flea) - > 100 mg/l - 48 h (Regulation (EC) No. 440/2008, Annex, C.2)

**Toxicity to algae**

static test ErC50 - *Desmodesmus subspicatus* (green algae) - > 100 mg/l - 96 h

(OECD Test Guideline 201)

**Toxicity to bacteria**

static test EC10 - activated sludge - > 1.995 mg/l - 30 min (OECD Test Guideline 209)

**Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d

Result: ca.85 % - Readily biodegradable. (OECD Test Guideline 301C)

Theoretical oxygen demand

2.170 mg/g Remarks: (IUCLID)

Ratio BOD/ThBOD 11 %

Remarks: (IUCLID)

**Bioaccumulative potential**

Does not bioaccumulate.

**Mobility in soil**

No data available

**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.

**Toxics Screening Level**

The ITSL for diethylene glycol monobutyl ether is 1 µg/m<sup>3</sup> based on annual averaging time.

### **Other adverse effects**

Discharge into the environment must be avoided.

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## SECTION 13: Disposal considerations

### **Waste treatment methods**

#### **Product**

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

#### **Waste Disposal**

DGBE is mixed with a combustible solvent and burned in a chemical incinerator. Small amounts may be disposed down the drain with large amounts of water.

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## SECTION 14: Transport information

### **UN number**

ADR/RID: - IMDG: - IATA: -

### **UN proper shipping name**

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

### **Transport hazard class(es)**

ADR/RID: - IMDG: - IATA: -

### **Packaging group**

ADR/RID: - IMDG: - IATA: -

### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

### **Special precautions for user**

### **Further information**

Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15: Regulatory information

### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **Regulations on the Safety Management of Hazardous Chemicals**



China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

### **Measures for Environmental Management of New Chemical Substances**

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

EC Inventory: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**

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

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

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

【4】 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)

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

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

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

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

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

【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

### **Other Information**

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.