

## SAFETY DATA SHEET

Version 4.8

Revision Date 09/22/2015

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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Benzyl ether

Product Number : W237108

Brand : Aldrich

Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich Canada Co.  
2149 Winston Park Drive  
OAKVILLE ON L6H 6J8  
CANADA

Manufacturer : Sigma-Aldrich Corporation  
3050 Spruce St.  
St. Louis, Missouri 63103  
USA

Telephone : +1 9058299500

Fax : +1 9058299292

Emergency Phone # (For both supplier and manufacturer) : 1-800-424-9300

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### WHMIS Classification

Not Rated

Moderate respiratory irritant

##### GHS Classification

Acute toxicity, Oral (Category 5)  
Specific target organ toxicity - single exposure (Category 3), Respiratory system  
Acute aquatic toxicity (Category 1)  
Chronic aquatic toxicity (Category 1)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H303 May be harmful if swallowed.  
H335 May cause respiratory irritation.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.  
P391 Collect spillage.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

**HMIS Classification**

Health hazard: 2  
Flammability: 1  
Physical hazards: 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : Dibenzyl ether

Formula : C<sub>14</sub>H<sub>14</sub>O

Molecular weight : 198.26 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Dibenzyl ether</b>			
103-50-4	203-118-2	-	<=100%

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**4. FIRST AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5. FIREFIGHTING MEASURES****Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

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

**Special protective equipment for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Explosion data - sensitivity to mechanical impact**

No data available

**Explosion data - sensitivity to static discharge**

No data available

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

### **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Personal protective equipment**

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's 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.

##### Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE 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.

#### **Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin and body protection**

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Specific engineering controls**

Use mechanical exhaust or laboratory fumehood to avoid exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	clear, liquid
Colour	colourless

### Safety data

pH	No data available
Melting point/freezing point	Melting point/range: 1.5 - 3.5 °C (34.7 - 38.3 °F) - lit.
Boiling point	298 °C (568 °F) - lit.
Flash point	135 °C (275 °F) - closed cup
Ignition temperature	No data available
Auto-ignition temperature	455 °C (851 °F) at 994 hPa (746 mmHg)
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	1.043 g/cm <sup>3</sup> at 25 °C (77 °F)
Water solubility	0.04 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - slightly soluble
Partition coefficient: n-octanol/water	log Pow: 3.31
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

No data available

### Materials to avoid

Strong oxidizing agents, Strong acids

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides  
Other decomposition products - No data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - Rat - male - 4,807 mg/kg

#### Inhalation LC50

No data available

#### Dermal LD50

No data available

**Other information on acute toxicity**

No data available

**Skin corrosion/irritation**

Skin - Rabbit - No skin irritation - 24 h

**Serious eye damage/eye irritation**

Eyes - Rabbit - No eye irritation - 24 h

**Respiratory or skin sensitisation**

Maximisation Test (GPMT) - Guinea pig - Does not cause skin sensitisation. - OECD Test Guideline 406

**Germ cell mutagenicity**

Genotoxicity in vitro - Ames test - Salmonella typhimurium - with and without metabolic activation - negative

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**Reproductive toxicity**

No data available

**Teratogenicity**

No data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

No data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available

**Aspiration hazard**

No data available

**Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.

**Signs and Symptoms of Exposure**

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

**Synergistic effects**

No data available

**Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 620 mg/kg  
RTECS: DQ6125000

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**12. ECOLOGICAL INFORMATION**

**Toxicity**

Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 0.77 mg/l - 48 h Method: OECD Test Guideline 202
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**Persistence and degradability**

Biodegradability aerobic Biochemical oxygen demand  
Result: 0 % - Not readily biodegradable.

**Bioaccumulative potential**

Bioaccumulation Cyprinus carpio (Carp) - 14 d  
Bioconcentration factor (BCF): 171 - 429  
Method: OECD Test Guideline 305C

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

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**13. DISPOSAL CONSIDERATIONS**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

Not dangerous goods

**IMDG**

UN number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dibenzyl ether)  
Marine pollutant: Marine pollutant

**IATA**

UN number: 3082 Class: 9 Packing group: III  
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Dibenzyl ether)

**Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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**15. REGULATORY INFORMATION**

**WHMIS Classification**

Not Rated

Moderate respiratory irritant

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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**16. OTHER INFORMATION**

**Further information**

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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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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