

DEC 15 2009

1/28/10

**SIGMA-ALDRICH****Material Safety Data Sheet**Version 3.0  
Revision Date 08/23/2008  
Print Date 11/30/2009**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Glycidyl isopropyl ether

Product Number : 291463  
Brand : Aldrich

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # : (314) 776-6555

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : C6H12O2  
Molecular Weight : 116.16 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
2,3-Epoxypropyl isopropyl ether			
4016-14-2	223-672-9	-	-

**3. HAZARDS IDENTIFICATION****Emergency Overview****OSHA Hazards**

Flammable Liquid, Target Organ Effect, Skin sensitizer, Irritant

**Target Organs**

Central nervous system

**HMIS Classification**

Health Hazard: 3  
Chronic Health Hazard: \*  
Flammability: 3  
Physical hazards: 3

**NFPA Rating**

Health Hazard: 3  
Fire: 3  
Reactivity Hazard: 3

**Potential Health Effects**

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

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**Eyes**  
**Ingestion**

Causes eye irritation.  
May be harmful if swallowed.

**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**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**5. FIRE-FIGHTING MEASURES****Flammable properties**

Flash point 33 °C (91 °F) - closed cup

Ignition temperature no data available

**Suitable extinguishing media**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Further information**

Use water spray to cool unopened containers.

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions**

Do not let product enter drains.

**Methods for cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Storage**

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
2,3-Epoxypropyl isopropyl ether	4016-14-2	TWA	50 ppm 238 mg/m3	1994-09-01	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004; Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
Remarks	Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.				
		STEL	75 ppm 356 mg/m3	1994-09-01	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004; Committees on Threshold Limit Values (TLVs ) and Biological Exposure Indices (BEIs)
	Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.				
		TWA	50 ppm 240 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
		STEL	75 ppm 360 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
		TWA	50 ppm 240 mg/m3	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.

## 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.

### Eye protection

Safety glasses

### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form liquid  
Colour light yellow

### Safety data

pH no data available  
Melting point no data available  
Boiling point 131 - 132 °C (268 - 270 °F)  
Flash point 33 °C (91 °F) - closed cup  
Ignition temperature no data available  
Lower explosion limit no data available  
Upper explosion limit no data available  
Density 0.924 g/mL at 25 °C (77 °F)  
Water solubility no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

Strong oxidizing agents, acids

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

### Hazardous reactions

Vapours may form explosive mixture with air.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - rat - 4,200 mg/kg

Remarks: Brain and Coverings: Recordings from specific areas of CNS. Behavioral: Somnolence (general depressed activity). Behavioral: Ataxia.

LD50 Dermal - rabbit - 9,650 mg/kg

Remarks: Lungs, Thorax, or Respiration: Acute pulmonary edema.

**Irritation and corrosion**

Skin - rabbit - Skin irritation

Eyes - rabbit - Moderate eye irritation

**Sensitisation**

May cause sensitization by skin contact.

**Chronic exposure**

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.

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

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

Genotoxicity in vitro - Hamster - Lungs  
Sister chromatid exchange**Signs and Symptoms of Exposure**

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

**Potential Health Effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Target Organs</b>	Central nervous system,

**Additional Information**

RTECS: TZ3500000

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

no data available

**Further information on ecology**

no data available

**13. DISPOSAL CONSIDERATIONS****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****DOT (US)**UN-Number: 3271 Class: 3 Packing group: III  
Proper shipping name: Ethers, n.o.s.  
Marine pollutant: No  
Poison Inhalation Hazard: No**IMDG**UN-Number: 3271 Class: 3 Packing group: III EMS-No: F-E, S-D  
Proper shipping name: ETHERS, N.O.S. (2,3-Epoxypropyl isopropyl ether)  
Marine pollutant: No**IATA**UN-Number: 3271 Class: 3 Packing group: III  
Proper shipping name: Ethers n.o.s. (2,3-Epoxypropyl isopropyl ether)**15. REGULATORY INFORMATION****OSHA Hazards**

Flammable Liquid, Target Organ Effect, Skin sensitizer, Irritant

**DSL Status**

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

2,3-Epoxypropyl isopropyl ether CAS-No. 4016-14-2

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

2,3-Epoxypropyl isopropyl ether CAS-No. 4016-14-2 Revision Date 1991-07-01

**Pennsylvania Right To Know Components**

2,3-Epoxypropyl isopropyl ether CAS-No. 4016-14-2 Revision Date 1991-07-01

**New Jersey Right To Know Components**

CAS-No. Revision Date

2,3-Epoxypropyl isopropyl ether

4016-14-2

1991-07-01

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

**16. OTHER INFORMATION**

**Further information**

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