1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 1,2-Dimethoxyethane
Product Number : E1129
Brand : Sigma
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

Synonyms : Monoglyme
Dimethylglycol
mono-Glyme
Ethylene glycol dimethyl ether

Formula : C₄H₁₀O₂
Molecular Weight : 90.12 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>110-71-4</td>
<td>203-794-9</td>
<td>603-031-00-3</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable Liquid, Target Organ Effect, Reproductive hazard

Target Organs
Liver, Kidney, Blood, Central nervous system, Female reproductive system., Male reproductive system.

HMIS Classification
Health Hazard: 1
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 3

NFPA Rating
Health Hazard: 0
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: 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: 5 °C (41 °F) - closed cup
Ignition temperature: 202 °C (396 °F)

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. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. 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).

7. HANDLING AND STORAGE

Handling
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. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.
Recommended storage temperature: 2 - 8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

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
Face shield and 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
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form liquid, clear
Colour colourless

Safety data
pH no data available
Melting point -58 °C (-72 °F) - lit.
Boiling point 85 °C (185 °F) - lit.
Flash point 5 °C (41 °F) - closed cup
Ignition temperature 202 °C (396 °F)
Lower explosion limit 1.6 %(V)
Upper explosion limit 10.4 %(V)
Vapour pressure 64 hPa (48 mmHg) at 20 °C (68 °F)
Density 0.867 g/mL at 25 °C (77 °F)
Water solubility soluble
Relative vapour density 3.11
- (Air = 1.0)

10. STABILITY AND REACTIVITY
Storage stability
Stable under recommended storage conditions.

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
Oxidizing agents, Strong acids

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

Hazardous reactions
Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - mouse - 3,200 mg/kg

Irritation and corrosion
no data available

Sensitisation
no data available

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.

May cause reproductive disorders.

Signs and Symptoms of Exposure
narcosis, Exposure to and/or consumption of alcohol may increase toxic effects.

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion May be harmful if swallowed.
Target Organs Liver, Kidney, Blood, Central nervous system, Female reproductive system., Male reproductive system.,

Additional Information
RTECS: KI1451000

12. ECOLOGICAL INFORMATION
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. 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: 2252  Class: 3  Packing group: II
- Proper shipping name: 1,2-Dimethoxyethane
- Marine pollutant: No
- Poison Inhalation Hazard: No

**IMDG**
- UN-Number: 2252  Class: 3  Packing group: II  EMS-No: F-E, S-D
- Proper shipping name: 1,2-DIMETHOXYETHANE
- Marine pollutant: No

**IATA**
- UN-Number: 2252  Class: 3  Packing group: II
- Proper shipping name: 1,2-Dimethoxyethane

15. REGULATORY INFORMATION

**OSHA Hazards**
Flammable Liquid, Target Organ Effect, Reproductive hazard

**DSL Status**
All components of this product are on the Canadian DSL list.

**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**
- Ethylene glycol dimethyl ether  CAS-No. 110-71-4  Revision Date 1993-04-24

**SARA 311/312 Hazards**
Fire Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**
- Ethylene glycol dimethyl ether  CAS-No. 110-71-4  Revision Date 1993-04-24
Pennsylvania Right To Know Components
Ethylene glycol dimethyl ether
CAS-No. 110-71-4
Revision Date 1993-04-24

New Jersey Right To Know Components
Ethylene glycol dimethyl ether
CAS-No. 110-71-4
Revision Date 1993-04-24

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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