



SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 01/10/2007  
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Version 1.80

### Section 1 - Product and Company Information

**Product Name** 2,2-Dimethoxypropane, reagent grade, 98%  
**Product Number** D136808  
**Brand** Sigma-Aldrich  
**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 800-325-5832  
**Fax:** 800-325-5052  
**Emergency Phone:** 314-778-6555

### Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
2,2-DIMETHOXYPROPANE	77-76-9	No	201-056-0	

**Formula** C5H12O2  
**Synonyms**

### Section 3 - Hazards Identification

**Emergency Overview**  
Flammable (USA) Highly Flammable (EU). Irritant.  
Irritating to eyes.

**HMIS Rating**  
Health: 2 Flammability: 3 Reactivity: 1  
**NFPA Rating**  
Health: 2 Flammability: 3 Reactivity: 1

For additional information on toxicity, please refer to Section 11.

### Section 4 - First Aid Measures

**Oral Exposure**  
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Inhalation Exposure**  
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**Dermal Exposure**  
In case of contact, immediately wash skin with soap and copious amounts of water.

**Eye Exposure**  
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

### Section 5 - Fire Fighting Measures

**Flammable Hazards:** Yes

**Explosion Hazards**  
Vapor may travel considerable distance to source of ignition and flash back.  
Container explosion may occur under fire conditions.

**Flash Point:** 14 °F -10 °C

**Explosion Limits:** Lower: 6 % Upper: 31 %

**Autoignition Temp:** N/A **Flammability:** Yes

**Extinguishing Media**  
**Suitable**

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.

**Firefighting**

**Protective Equipment**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Specific Hazard(s)**

Flammable liquid. Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

**Procedure to be Followed in Case of Leak or Spill**  
Evacuate area. Shut off all sources of ignition.

**Procedure(s) of Personal Precaution(s)**  
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**Methods for Cleaning Up**  
Cover with an activated carbon adsorbent, take up and place in closed containers. Transport outdoors. Ventilate area and wash spill site after material pickup is complete.

### Section 7 - Handling and Storage

**Handling**

**User Exposure**

Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage**

**Suitable**

Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place.

**Special Requirements**

Moisture sensitive.

### Section 8 - Exposure Controls / PPE

**Engineering Controls**

Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

**Personal Protective Equipment**

**Respiratory**

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.

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**Hand**

Compatible chemical-resistant gloves.

**Eye**

Chemical safety goggles.

**General Hygiene Measures**

Wash thoroughly after handling. Wash contaminated clothing before reuse.

**Section 9 - Physical/Chemical Properties**

Appearance			
Physical State	Clear liquid	Color	Colorless
Molecular Weight:	104.15 AMU		
pH	N/A		
BP/BP Range	79 - 81 °C		
MP/MP Range	N/A		
Freezing Point	N/A		
Vapor Pressure	60 mmHg	15.8 °C	
Vapor Density	3.59 g/l		
Saturated Vapor Conc.	N/A		
SG/Density	0.849 g/cm3		
Bulk Density	N/A		
Odor Threshold	N/A		
Volatile%	N/A		
VOC Content	N/A		
Water Content	N/A		
Solvent Content	N/A		
Evaporation Rate	N/A		
Viscosity	N/A		
Partition Coefficient	Log Kow: 1.224		
Decomposition Temp.	N/A		
Flash Point °F	14 °F		Method: closed cup
Flash Point °C	-10 °C		Method: closed cup
Explosion Limits	Lower: 6 % Upper: 31 %	27 °C 58 °C	
Flammability	N/A		
Autoignition Temp	N/A		
Refractive Index	1.378		
Solubility	N/A		

N/A = not available

**Section 10 - Stability and Reactivity****Stability**

Stable

Stable.

**Conditions of Instability**

May decompose on exposure to moist air or water.

**Materials to Avoid**

Perchlorates., Acids, Strong oxidizing agents.

**Hazardous Decomposition Products****Hazardous Decomposition Products**

Carbon monoxide, Carbon dioxide.

**Hazardous Polymerization****Hazardous Polymerization**

Will not occur.

**Section 11 - Toxicological Information****Route of Exposure****Skin Contact**

May cause skin irritation.

**Skin Absorption**

May be harmful if absorbed through the skin.

**Eye Contact**

Causes eye irritation.

**Inhalation**

May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**Ingestion**

May be harmful if swallowed.

**Signs and Symptoms of Exposure**

Exposure can cause: Drying, cracking, or irritation of the skin.

**RTECS Number:** N/A**Toxicity Data**

Oral - Rat: &gt; 2,260 mg/kg(LD50)

Skin - Rat: &gt; 2,100 mg/kg(LD50)

**Section 12 - Ecological Information**

No data available.

**Section 13 - Disposal Considerations****Appropriate Method of Disposal or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.

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.

**Section 14 - Transport Information****DOT****Proper Shipping Name:** Flammable liquids, n.o.s.**UN#:** 1993**Class:** 3**Packing Group:** Packing Group II**Hazard Label:** Flammable liquid**PIH:** Not PIH**IATA****Proper Shipping Name:** Flammable liquid, n.o.s.**IATA UN Number:** 1993**Hazard Class:** 3**Packing Group:** II

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## Section 15 - Regulatory Information

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### EU Additional Classification

**Symbol of Danger:** F+ Xi

**Indication of Danger**

Highly Flammable. Irritant.

**Risk Statements**

**R:** 11 36

Highly flammable. Irritating to eyes.

**Safety Statements**

**S:** 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### US Classification and Label Text

**Indication of Danger**

Flammable (USA) Highly Flammable (EU). Irritant.

**Risk Statements**

Irritating to eyes.

**Safety Statements**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### United States Regulatory Information

**SARA Listed:** No

### Canada Regulatory Information

**WHMIS Classification**

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

**DSL:** Yes

**NDSL:** No

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## Section 16 - Other Information

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### Disclaimer

For R&D use only. Not for drug, household or other uses.

### Warranty

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 Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

