

## Section 1 - Product and Company Information

Product Name ALPHA-PINENE OXIDE, 97%  
Product Number 218308  
Brand ALDRICH

Company Sigma-Aldrich Canada, Ltd  
Address 2149 Winston Park Drive  
Oakville ON L6H 6J8 CA

Technical Phone: 9058299500  
Fax: 9058299292  
Emergency Phone: 800-424-9300

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
ALPHA-PINENE OXIDE	1686-14-2	No
Formula	C10H16O	
Synonyms	2,3-Epoxy-pinane * 3-Oxatricyclo(4.1.1.0(sup 2,4))octane, 2,7,7-trimethyl- (9CI) * alpha-Pinene epoxide * alpha-Pinene oxide * 2,7,7-Trimethyl-3-oxatricyclo(4.1.1.0(sup 2,4))octane	
RTCS Number:	TK4565000	

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Combustible.

## HMIS RATING

HEALTH: 0

FLAMMABILITY: 2

REACTIVITY: 0

## NFPA RATING

HEALTH: 0

FLAMMABILITY: 2

REACTIVITY: 0

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

## FLASH POINT

150 °F 66 °C Method: closed cup

## AUTOIGNITION TEMP

N/A

## FLAMMABILITY

N/A

## 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): Combustible liquid. Emits toxic fumes under fire conditions.

## Section 6 - Accidental Release Measures

## PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

## PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

## METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. 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 and open flame.

## Section 8 - Exposure Controls / PPE

## ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

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## 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. Hand: Compatible chemical-resistant gloves. Eye: Chemical safety goggles.

## GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

## Section 9 - Physical/Chemical Properties

## Appearance

Physical State: Liquid  
Color: Colorless

## Property

Value

At Temperature or Pressure

Molecular Weight	152.24 AMU	
pH	N/A	
BP/BP Range	102.0 - 103.0 °C	50 mmHg
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	0.964 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatility	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	150 °F 66 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A - not available

## Section 10 - Stability and Reactivity

## STABILITY

Materials to Avoid: Acids, Bases, Oxidizing agents.

## HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

## HAZARDOUS POLYMERIZATION

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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: May cause 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

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

## TOXICITY DATA

Intramuscular

Mouse

100 MG/KG

LD50

## CHRONIC EXPOSURE - MUTAGEN

Species: Hamster

Dose: 500 UMOL/L

Cell Type: lung

Mutation test: Sister chromatid exchange

## Section 12 - Ecological Information

No data available.

## Section 13 - Disposal Considerations

## APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. 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 III

Hazard Label: Flammable liquid

PIH: Not PIH

## IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

## Section 15 - Regulatory Information

## US CLASSIFICATION AND LABEL TEXT

US Statements: Combustible.

## UNITED STATES REGULATORY INFORMATION

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SARA LISTED: No

TSCA INVENTED ITEM: Yes

## 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

## Section 16 - Other Information

## DISCLAIMER

For R&amp;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 2009 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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