

## Material Safety Data Sheet

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Version 1.1

According to 91/155/EEC

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1 - Product and Company Information

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Product Name	ALPHA-PINENE OXIDE, 97%
Product Number	218308
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765 Australia
Technical Phone #	+61 2 9841 0555
Fax	+61 2 9841 0500
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2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
ALPHA-PINENE OXIDE, 97%	1686-14-2	216-869-6	None
Formula	C10H16O		
Molecular Weight	152.24 AMU		
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		

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3 - Hazards Identification

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4 - First Aid Measures

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## AFTER INHALATION

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

## AFTER SKIN CONTACT

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

## AFTER EYE CONTACT

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

## AFTER INGESTION

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

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5 - Fire Fighting Measures

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## EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

#### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

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

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### 6 - Accidental Release Measures

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#### PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

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

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

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### 7 - Handling and Storage

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#### HANDLING

Directions for Safe Handling: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat and open flame. Store in a cool dry place.

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### 8 - Exposure Controls / Personal Protection

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#### ENGINEERING CONTROLS

Mechanical exhaust required. Safety shower and eye bath.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

#### PERSONAL PROTECTIVE EQUIPMENT

Special Protective Measures: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

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### 9 - Physical and Chemical Properties

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Appearance	N/A	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	102 - 103 °C	50 mmHg
MP/MP Range	N/A	
Flash Point	66 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	

Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	0.964 g/cm3
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

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## 10 - Stability and Reactivity

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### STABILITY

Materials to Avoid: Acids, Bases, Oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

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## 11 - Toxicological Information

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RTECS NUMBER: TK4565000

### ACUTE TOXICITY

LD50  
Intramuscular  
Mouse  
100 MG/KG

### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.  
Eye Contact: May cause eye irritation.  
Multiple Routes: May be harmful by inhalation, ingestion, or skin absorption.

### CHRONIC EXPOSURE - MUTAGEN

Hamster  
500 UMOL/L  
Cell Type: lung  
Sister chromatid exchange

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## 12 - Ecological Information

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No data available.

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## 13 - Disposal Considerations

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### SUBSTANCE DISPOSAL

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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## 14 - Transport Information

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RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

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15 - Regulatory Information

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16 - Other Information

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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 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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