

## Material Safety Data Sheet

Date Printed: 09/JUN/2005  
Date Updated: 16/MAR/2004  
Version 1.2  
According to 91/155/EEC

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1 - Product and Company Information

Product Name 1,3-DITHIANE, 97%  
Product Number 157872  
  
Company Sigma-Aldrich Pty. Ltd.  
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## 2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
1,3-DITHIANE	505-23-7	208-006-7	None
Formula	C4H8S2		
Molecular Weight	120.24 AMU		
Synonyms	1,3-Dithiacyclohexane * 1,3-Dithiane * Dithiane-1,3 (French)		

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## 3 - Hazards Identification

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4 - First Aid Measures

## 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

## EXTINGUISHING MEDIA

Suitable: Water spray. 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  
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. 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 dust. Avoid contact and inhalation. 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.

SPECIAL REQUIREMENTS: Hygroscopic.

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## 8 - Exposure Controls / Personal Protection

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ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Remove and wash contaminated clothing promptly.

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	Color: White Form: Crystals
Property	Value
pH	N/A
BP/BP Range	N/A
MP/MP Range	52 °C
Flash Point	90 °C
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	N/A
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

Conditions of Instability: Moisture.

Conditions to Avoid: Moisture.

Materials to Avoid: Strong bases, Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Sulfur oxides, Hydrogen sulfide gas.

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## 11 - Toxicological Information

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RTECS NUMBER: JO5070000

### ACUTE TOXICITY

LD50

Intraperitoneal

Mouse

1500 MG/KG

### SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Nausea, headache, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### ROUTE OF EXPOSURE

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

### CHRONIC EXPOSURE - MUTAGEN

Hamster

80 UMOL/L

Cell Type: ovary

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

UN#: 1325  
Class: 4.1  
PG: II

Proper Shipping Name: Flammable solid, organic, n.o.s.

### IMDG

UN#: 1325  
Class: 4.1  
PG: II

Proper Shipping Name: FLAMMABLE SOLID, ORGANIC, N.O.S.

Marine Pollutant: No

Severe Marine Pollutant: No

Technical Name: Required

### IATA

UN#: 1325  
Class: 4.1  
PG: II

Proper Shipping Name: Flammable solid, organic, n.o.s.

Inhalation Packing Group I: No

Technical Name: Required

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## 15 - Regulatory Information

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### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

S-PHRASES: 22 24/25

Do not breathe dust. Avoid contact with skin and eyes.

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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 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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