

## MATERIAL SAFETY DATA SHEET

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Version 1.6

## Section 1 - Product and Company Information

Product Name DIMETHYLDICHLOROSILANE  
Product Number D3879  
Brand SIGMA

Company Sigma-Aldrich  
Street Address 3050 Spruce Street  
City, State, Zip, Country SAINT LOUIS MO 63103 US  
Technical Phone: 314 771 5765  
Emergency Phone: 414 273 3850 Ext. 5996  
Fax: 800 325 5052

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
DICHLORODIMETHYLSILANE	75-78-5	Yes

Formula C<sub>2</sub>H<sub>6</sub>Cl<sub>2</sub>Si  
Synonyms Dichlorodimethylsilane \* Dichlorodimethylsilicon  
\* Dimethyl-dichlorsilan (Czech) \* Dimethylsilane  
dichloride \* Inerton AW-DMCS \* LS 130 \*  
Repel-Silan  
RTECS Number: VV3150000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Flammable (USA) Highly Flammable (EU). Corrosive.  
Reacts violently with water. Harmful by inhalation. Causes burns.  
Lachrymator.

## HMIS RATING

HEALTH: 3  
FLAMMABILITY: 3  
REACTIVITY: 2  
SPECIAL HAZARD(S): Water reactive

## NFPA RATING

HEALTH: 3  
FLAMMABILITY: 3  
REACTIVITY: 2  
SPECIAL HAZARD(S): Water reactive

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 immediately. Do not induce vomiting.

## 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 skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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### Section 5 - Fire Fighting Measures

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#### FLAMMABLE HAZARDS

Flammable Hazards: Yes

#### EXPLOSION HAZARDS

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

#### CONDITIONS OF FLAMMABILITY

Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.

#### FLASH POINT

23 °F - 5.0 °C Method: closed cup

#### EXPLOSION LIMITS

Lower: 5.5 % Upper: 10.4 %

#### AUTOIGNITION TEMP

N/A

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

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

Unsuitable: Do not use water.

#### FIREFIGHTING

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

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

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### Section 6 - Accidental Release Measures

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

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

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

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

#### METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered

containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

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## Section 7 - Handling and Storage

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### HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

### STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame. Store under nitrogen.

Incompatible Materials: Do not allow contact with water

Store at 2-8°C

### SPECIAL REQUIREMENTS

Handle and store under inert gas.

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## Section 8 - Exposure Controls / PPE

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### ENGINEERING CONTROLS

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

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Other: Faceshield (8-inch minimum).

### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

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## Section 9 - Physical/Chemical Properties

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### Appearance

Physical State: Clear liquid  
Color: Colorless

Property	Value	At Temperature or Pressure
Molecular Weight	129.06 AMU	
pH	N/A	
BP/BP Range	70 °C	760 mmHg
MP/MP Range	- 76.0 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	1.45 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.072 g/cm <sup>3</sup>	
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	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	

Flash Point	23 °F - 5.0 °C	Method: closed cup
Explosion Limits	Lower: 5.5 % Upper: 10.4 %	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.404	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Conditions to Avoid: Do not allow water to enter container because of violent reaction.

Materials to Avoid: Strong bases, Amines, Alcohols.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hydrogen chloride gas, Silicon oxide Carbon monoxide, Carbon dioxide.

Hazardous Decomposition Products Formed Upon Contact with Water: Hydrogen chloride gas

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns.

Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Toxic if inhaled.

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. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

### TOXICITY DATA

Oral

Rat

5660 UL/KG

LD50

Remarks: Behavioral:Somnolence (general depressed activity).

Lungs, Thorax, or Respiration:Dyspnea. Liver:Other changes.

Inhalation

Rat

930 ppm

LC50

Inhalation  
Mouse  
300 mg/m3  
LC50

IRRITATION DATA

Skin  
Rabbit  
20 mg  
24H  
Remarks: Moderate irritation effect

Eyes  
Rabbit  
5 mg  
24H  
Remarks: Severe irritation effect

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Section 12 - Ecological Information

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No data available.

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Section 13 - Disposal Considerations

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APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE 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.

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Section 14 - Transport Information

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DOT

Proper Shipping Name: Dimethyldichlorosilane  
UN#: 1162  
Class: 3  
Packing Group: Packing Group II  
Hazard Label: Flammable liquid  
Hazard Label: Corrosive  
PIH: Not PIH

IATA

Proper Shipping Name: Dimethyldichlorosilane  
IATA UN Number: 1162  
Hazard Class: 3  
Packing Group: II

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Section 15 - Regulatory Information

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EU DIRECTIVES CLASSIFICATION

Symbol of Danger: F-Xi  
Indication of Danger: Highly Flammable. Irritant.  
R: 11-36/37/38  
Risk Statements: Highly flammable. Irritating to eyes, respiratory system and skin.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable (USA) Highly Flammable (EU).

Corrosive.

Risk Statements: Reacts violently with water. Harmful by inhalation. Causes burns.

Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements: Lachrymator.

#### UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

DEMINIMIS: 1 %

NOTES: This product is subject to SARA section 313 reporting requirements.

TSCA INVENTORY 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

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