

MATERIAL SAFETY DATA SHEET

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Version 1.4

Section 1 - Product and Company Information

Product Name METHYLTRICHLOROSILANE, 97%
Product Number 440299
Brand ALDRICH

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
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Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
METHYLTRICHLOROSILANE	75-79-6	

Formula CH3Cl3Si
Synonyms KA 13 * LS 40 (silane) * Methylsilicochloroform *
Methylsilicon trichloride * Methylsilyl
trichloride * Methyl-trichlorsilan (Czech) *
Silane, trichloromethyl- * Trichlor-methylsilan
(Czech) * Trichloromethylsilane *
Trichloromethylsilicon
RTECS Number: VV4550000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable (USA) Highly Flammable (EU). Corrosive.
Reacts violently with water. Causes burns.
Readily absorbed through skin.

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.

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

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

46.4 °F 8 °C Method: closed cup

EXPLOSION LIMITS

Lower: 7.2 % Upper: 11.9 %

AUTOIGNITION TEMP

> 404 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Carbon dioxide.
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): Flammable liquid. Water reactive material.
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. 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.

Section 7 - Handling and Storage

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.

SPECIAL REQUIREMENTS

Handle and store under inert gas.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

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

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Remove and wash contaminated clothing promptly. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Liquid	
Property	Value	At Temperature or Pressure
Molecular Weight	149.48 AMU	
pH	N/A	
BP/BP Range	65.0 - 66.0 °C	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	5.2 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.27 g/cm ³	
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	46.4 °F 8 °C	Method: closed cup
Explosion Limits	Lower: 7.2 % Upper: 11.9 %	
Flammability	N/A	
Autoignition Temp	> 404 °C	

Refractive Index	1.411
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

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

Materials to Avoid: Strong acids, Strong bases, Strong oxidizing agents Reacts violently with water.

HAZARDOUS DECOMPOSITION PRODUCTS

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

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes burns.

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

Readily absorbed through skin.

Eye Contact: Causes burns.

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

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. 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.

TOXICITY DATA

Oral Oral

Rat Rat

1620 UL/KG 1620 UL/KG

LD50 LD50

Remarks: Gastrointestinal:Other changes. Lungs, Thorax, or Respiration:Dyspnea. Gastrointestinal:Hypermotility, diarrhea. Gastrointestinal:Other changes. Gastrointestinal:Hypermotility, diarrhea. Lungs, Thorax, or Respiration:Dyspnea.

Inhalation Inhalation

Rat Rat

450 ppm 450 ppm

LC50 LC50

Inhalation Inhalation
Mouse Mouse
180 mg/m3 180 mg/m3
LC50 LC50

Skin Skin
Rabbit Rabbit
840 UL/KG 840 UL/KG
LD50 LD50

Remarks: Nutritional and Gross Metabolic:Weight loss or decreased weight gain. Liver:Other changes. Behavioral:Altered sleep time (including change in righting reflex). Liver:Other changes. Behavioral:Altered sleep time (including change in righting reflex). Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

IRRITATION DATA

Skin Skin
Rabbit Rabbit
0.5 ml 0.5 ml
Remarks: Severe irritation effect Severe irritation effect

Eyes Eyes
Rabbit Rabbit
5 mg 5 mg
24H 24H
Remarks: Severe irritation effect Severe irritation effect

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. 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: Methyltrichlorosilane
UN#: 1250
Class: 3
Packing Group: Packing Group I
Hazard Label: Flammable liquid
Hazard Label: Corrosive
PIH: Not PIH

IATA

Proper Shipping Name: Methyltrichlorosilane
IATA UN Number: 1250
Hazard Class: 3
Packing Group: I
Not Allowed - Aircraft: Cargo aircraft only. Not permitted on passenger aircraft.

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: F-Xi

Indication of Danger: Highly Flammable. Irritant.

R: 11-14-36/37/38

Risk Statements: Highly flammable. Reacts violently with water. Irritating to eyes, respiratory system and skin.

S: 26-39

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

US CLASSIFICATION AND LABEL TEXT

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

Risk Statements: Reacts violently with water. 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: Readily absorbed through skin.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes 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&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.