MATERIAL SAFETY DATA SHEET

TRIMETHYL CHLOROSILANE

Product Trade Name: CHLORO TRIMETHYL SILANE

SECTION 1. PRODUCT AND COMPANY INFORMATION

Identification of Substances or Preparation

Product Trade Name : Chlorotrimethylsilane
Synonyms : Trimethylsilyl chloride, Trimethylsilyl chloride
Product Code : TMCS

Company Undertaking

Identification


For information call: 91 2667 264103/4/5

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENT

Substance Name CAS # SARA 313

CHLOROTRIMETHYLSILANE 75-77-4 No

Formula : C₃H₉ClSi
Synonyms : Chlorotrimethylsilane/Silane, trimethylchloro/Silicane, chlorotrimethyl Trimethyl chlorosilane/Trimethylsilyl chloride
RTECS Number : VV2710000

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable (USA) Highly Flammable (EU). Corrosive. Reacts violently with water. Causes severe burns. Irritating to respiratory system. Harmful by inhalation and in contact with skin.

Target organ(s): Lungs. Nerves.

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

*additional chronic hazards present.
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.

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 : - 0.4 °F - 18.0 °F
EXPLOSION LIMITS : Lower: 2 % Upper: 6.4 %
AUTOIGNITION TEMP : 400 °C
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): Flammable liquid. 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.


SPECIAL REQUIREMENTS: Store under inert gas.

SECTION 8 - EXPOSURE CONTROLS / PPE

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

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. Discard contaminated shoes. Wash thoroughly after handling.

SECTION 9 - PHYSICAL/CHEMICAL PROPERTIES

Appearance: Physical State: Clear liquid
Color: Colorless

Molecular Weight: 108.64 gm/mol
pH: N/A
BP/BP Range : 56.0 - 57.0 °C
MP/MP Range : -40.0 °C
Freezing Point : N/A
Vapor Pressure : N/A
Vapor Density : 3.7 g/l
Saturated Vapor Conc: N/A
SG/Density : 0.856 g/cm³
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 : -0.4 °F - 18.0 °F
Explosion Limits : Lower: 2 % Upper: 6.4 %
Flammability N/A
Autoignition Temp : 400 °C
Refractive Index : 1.388
Optical Rotation : N/A
Miscellaneous Data : N/A
Solubility : N/A

SECTION 10 - STABILITY AND REACTIVITY

STABILITY
Stable: Stable.
Reactions to Avoid: Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.
Conditions to Avoid: Do not allow water to enter container because of violent reaction.
Materials to Avoid: Strong acids, Strong bases, Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Silicon oxide, Formaldehyde, Silicon dioxide.
HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

ROUTE OF EXPOSURE
Skin Contact: Causes burns.
Skin Absorption: Harmful if absorbed through skin.
Eye Contact: Causes burns.
Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Harmful if inhaled.
Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)
Nerves. Lungs.

SIGNS AND SYMPTOMS OF EXPOSURE
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA
Inhalation
Rat : 12,900 mg/m3 : LC50
Oral
Rat : 5660 UL/KG : LD50

Skin
Rabbit : 1780 UL/KG : LD50

IRRITATION DATA
Skin
Rabbit
Remarks: Severe irritation effect
Rabbit
0.5 ml
Remarks: Moderate irritation effect

Eyes

Rabbit
0.005 ml
Remarks: Moderate irritation effect

CHRONIC EXPOSURE - CARCINOGEN

Result: This material has not been classified by IARC, OSHA, ACGIH, EPA, or NTP as to its carcinogenicity, however, some studies have shown that this material may induce certain types of cancers.

Species: Mouse
Route of Application: Intraperitoneal
Dose: 1000 mg/Kg
Exposure Time: 1
Result: Tumorigenic: Neoplastic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.

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: Trimethylchlorosilane
UN#: 1298
Class: 3
Packing Group:
Hazard Label: Flammable liquid
Hazard Label: Corrosive

IATA
Proper Shipping Name: Trimethylchlorosilane
IATA UN Number: 1298
Hazard Class: 3

SECTION 15 - REGULATORY INFORMATION

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: F-C
R: 11-14-20/21-35-37
Risk Statements: Highly flammable. Reacts violently with water. Harmful by inhalation and in contact with skin. Causes severe burns. Irritating to respiratory system.
S: 16-26-36/37/39-45
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 CLASSIFICATION AND LABEL TEXT

Risk Statements: Reacts violently with water. Causes severe burns. Irritating to respiratory system. Harmful by inhalation and in contact with skin.
Safety Statements: Keep container tightly closed and in well-ventilated place. 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).


UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
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

SECTION 16- OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS: Not applicable

Additional Information For additional information on the use of this product, contact CHEMCON representative.
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. Chemcon Speciality Chemicals Pvt. Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.

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