



## 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**

Chemcon Speciality Chemicals Pvt. Ltd. Block No-355, Manjusar-Kunpad Road, Village-Manjusar, Taluka: Savli Distt. Vadodara-391 775 INDIA

**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 : C <sub>3</sub> H <sub>9</sub> ClSi		
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.

**STORAGE:** Suitable: Store under inert gas. Keep tightly closed. Keep away from heat, sparks, and open flame.

**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/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	:	- 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/m<sup>3</sup> : LC50

Oral

Rat : 5660 UL/KG : LD50

Remarks: Gastrointestinal: Other changes. Lungs, Thorax, or Respiration: Dyspnea. Behavioral: Somnolence (general depressed activity).

Skin

Rabbit : 1780 UL/KG : LD50

Remarks: Nutritional and Gross Metabolic: Weight loss or decreased weight gain. Behavioral: Altered sleep time (including change in righting reflex). Gastrointestinal: Hypermotility, diarrhea.

### IRRITATION DATA

Skin

Rabbit

Remarks: Severe irritation effect

Skin



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

Indication of Danger: Highly Flammable. Corrosive.

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**

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

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).

US Statements: Target organ(s): Lungs. Nerves.

### **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.



**CHEMCON**  
Speciality Chemicals Pvt. Ltd.



Reg. No. : GUJRG-1605

Phone : 91-265-2511271 / 2512088 / 2561195  
Fax : 91-265-2571550 / 2563493  
Email : info@cscpl.com  
expo@cscpl.com  
Website : www.cscpl.com

Manufacturing Location : Block no. 355-357, Kunpad Road,  
Vill. Manjusar, Taluka. Savli, VADODARA.  
GUJARAT, INDIA. 391775

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