

# SAFETY DATA SHEET

according to the OSHA  
Hazard Communication Standard

Version 6.10  
Revision Date 07/22/2026  
Print Date 07/23/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : Dichlorodimethylsilane

Product Number : 440272  
Brand : Aldrich  
Index-No. : 014-003-00-X  
CAS-No. : 75-78-5

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

**Hazards for the product as supplied**

Flammable liquids : Category 2

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 3

Skin corrosion : Sub-category 1A

Serious eye damage : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

**Other hazards**

None known.

**GHS label elements**

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H331 Toxic if inhaled.  
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P261 Avoid breathing mist or vapours.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse

mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/ doctor.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

#### **Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

#### **Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

---

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

CAS-No. : 75-78-5

#### **Components**

| Chemical name          | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|------------------------|-------------------|-----------------------|--------------|
| dichlorodimethylsilane | 75-78-5*          | >= 80 - <= 100        | TSC          |

\* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

---

### **SECTION 4. FIRST AID MEASURES**

General advice : First aiders need to protect themselves.  
Show this safety data sheet to the doctor in attendance.

If inhaled : After inhalation: fresh air. Immediately call in physician.  
If breathing stops: immediately apply artificial

respiration, if necessary also oxygen.

|                                                             |                                                                                                                                                                      |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| In case of skin contact                                     | : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.                              |
| In case of eye contact                                      | : After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.                                                     |
| If swallowed                                                | : After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise. |
| Most important symptoms and effects, both acute and delayed | : The most important known symptoms and effects are described in the labelling (see section 2 GHS label elements) and/or in section 11                               |
| Protection of first-aiders                                  | : For personal protection see section 8.                                                                                                                             |
| Notes to physician                                          | : No data available                                                                                                                                                  |

---

## SECTION 5. FIREFIGHTING MEASURES

|                                       |                                                                                                           |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media          | : Carbon dioxide (CO <sub>2</sub> )<br>Dry powder                                                         |
| Unsuitable extinguishing media        | : Foam<br>Water                                                                                           |
| Specific hazards during fire fighting | : Flash back possible over considerable distance.<br>Container explosion may occur under fire conditions. |

Combustible.

Pay attention to flashback.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

Hazardous combustion products : Carbon oxides

Hydrogen chloride gas

silicon oxides

Specific extinguishing methods : No data available

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

Remove container from danger zone and cool with water.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Do not breathe vapours, aerosols.  
Avoid substance contact.  
Ensure adequate ventilation.  
Keep away from heat and sources of ignition.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:  
Wear appropriate personal protective equipment, as indicated in Section 8.

Environmental precautions : Do not let product enter drains.  
Risk of explosion.

Methods and materials for containment and cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

---

## SECTION 7. HANDLING AND STORAGE

For precautions see section 2 GHS label elements

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Advice on safe handling : Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Materials to avoid : Keep away from water.

Storage class : 3, Flammable liquids

Recommended storage temperature : 36 - 46 °F / 2 - 8 °C

Further information on storage stability : Handle and store under inert gas.

---

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

| Components             | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis   |
|------------------------|---------|-------------------------------|------------------------------------------------|---------|
| dichlorodimethylsilane | 75-78-5 | CEIL                          | 2 ppm                                          | US WEEL |

**Engineering measures** : No data available

## Personal protective equipment

Respiratory protection : required when vapours/aerosols are generated.  
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type B

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

### Hand protection

Material : Viton®  
Break through time : 480 min  
Glove thickness : 0.7 mm  
Protective index : Full contact  
Manufacturer : Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Material : Nitrile rubber  
Break through time : 30 min  
Glove thickness : 0.4 mm  
Protective index : Splash contact  
Manufacturer : Camatril® (KCL 730 / Aldrich Z677442, Size M)

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Tightly fitting safety goggles

Skin and body protection : Flame retardant antistatic protective clothing.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                                     |                                                          |
|-----------------------------------------------------|----------------------------------------------------------|
| Appearance                                          | : liquid                                                 |
| Colour                                              | : colourless                                             |
| Odour                                               | : No data available                                      |
| Odour Threshold                                     | : No data available                                      |
| pH                                                  | : No data available                                      |
| Melting point/ range                                | : -105 °F / -76 °C<br>Method: lit.                       |
| Boiling point/boiling range                         | : 158 °F / 70 °C<br>Method: lit.                         |
| Flash point                                         | : 34 °F / 1 °C<br>(1,013 hPa)<br>Method: closed cup      |
| Evaporation rate                                    | : No data available                                      |
| Flammability (solid, gas)                           | : No data available                                      |
| Flammability (liquids)                              | : No data available                                      |
| Burning rate                                        | : No data available                                      |
| Self-ignition                                       | : 797 °F / 425 °C<br>1,013 hPa                           |
| Upper explosion limit /<br>Upper flammability limit | : Upper flammability limit<br>10.4 %(V)                  |
| Lower explosion limit /<br>Lower flammability limit | : Lower flammability limit<br>5.5 %(V)                   |
| Vapour pressure                                     | : 146.26 hPa (68 °F / 20 °C)                             |
| Relative vapour density                             | : No data available                                      |
| Relative density                                    | : No data available                                      |
| Density                                             | : 1.07 g/cm <sup>3</sup> (77 °F / 25 °C)<br>Method: lit. |

Solubility(ies)

Aldrich - 440272

Page 8 of 15

|                                           |                                        |
|-------------------------------------------|----------------------------------------|
| Water solubility                          | : hydrolyses                           |
| Partition coefficient: n-octanol/water    | : log Pow: 1.81                        |
| Autoignition temperature                  | : 797 °F / 425 °C<br>Method: DIN 51794 |
| Decomposition temperature                 | : No data available                    |
| Viscosity, dynamic                        | : No data available                    |
| Viscosity, kinematic                      | : No data available                    |
| Flow time                                 | : No data available                    |
| Explosive properties                      | : Not classified as explosive.         |
| Oxidizing properties                      | : none                                 |
| Molecular weight                          | : 129.06 g/mol                         |
| Particle characteristics<br>Particle size | : No data available                    |

---

## SECTION 10. STABILITY AND REACTIVITY

|                                    |                                                                                                                                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | : Vapours may form explosive mixture with air.                                                                                                                                                                                      |
| Chemical stability                 | : The product is chemically stable under standard ambient conditions (room temperature) .                                                                                                                                           |
| Possibility of hazardous reactions | : Exothermic reaction with:<br>Water<br>Alcohols<br>Acetone<br>Esters<br>Ketones<br>Aldehydes<br>Amines<br>alkalines<br>Oxidizing agents<br>acids<br>Risk of ignition or formation of inflammable gases or vapours with:<br>Ammonia |
| Conditions to avoid                | : Do not allow water to enter container because of violent reaction.                                                                                                                                                                |

Warming.

Incompatible materials : No data available

Hazardous decomposition products : For Hazardous combustion products in the event of fire: see section 5

---

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 595 mg/kg  
(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 2.77 mg/l - vapour

(OECD Test Guideline 403)

Dermal: No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Causes severe burns. - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium*

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Species: Rat

Application Route: Intraperitoneal

Method: OECD Test Guideline 475

Result: negative

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**Reproductive toxicity**

No data available

No data available

**Specific target organ toxicity - single exposure**

May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

RTECS: VV3150000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

---

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****dichlorodimethylsilane:**

Toxicity to fish : LC0 (Danio rerio (zebra fish)):  $\geq 1,000$  mg/l  
Exposure time: 96 h  
Remarks: (External MSDS)

**Persistence and degradability**

No data available

**Bioaccumulative potential****Components:****dichlorodimethylsilane:**

Partition coefficient: n- : log Pow: 1.81  
octanol/water

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section

#### 602 Class I Substances

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

#### Endocrine disrupting properties

No data available

---

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

---

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### IATA-DGR

UN/ID No. : UN 1162  
Proper shipping name : Dimethyldichlorosilane  
Class : 3  
Subsidiary risk : 8  
Packing group : II  
Labels : Class 3 - Flammable liquids, Class 8 - Corrosive substances  
Packing instruction (cargo : 377  
aircraft)  
Packing instruction : Not permitted for transport  
(passenger aircraft)

##### IMDG-Code

UN number : UN 1162  
Proper shipping name : DIMETHYLDICHLOROSILANE  
  
Class : 3  
Subsidiary risk : 8  
Packing group : II  
Labels : 3 (8)  
EmS Code : F-E, S-C  
Marine pollutant : no

#### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

#### National Regulations

##### 49 CFR

Aldrich - 440272

Page 12 of 15

UN/ID/NA number : UN 1162  
 Proper shipping name : Dimethyldichlorosilane  
  
 Class : 3  
  
 Subsidiary risk : 8  
 Packing group : II  
 Labels : Class 3 - Flammable liquids, Class 8 - Corrosive substances  
 ERG Code : 155  
 Marine pollutant : no  
 Poison Inhalation Hazard : No

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

| Components             | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|------------------------|---------|--------------------|-----------------------------|
| dichlorodimethylsilane | 75-78-5 | 500                | 500                         |

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

| Components             | CAS-No. | Component TPQ (lbs) |
|------------------------|---------|---------------------|
| dichlorodimethylsilane | 75-78-5 | 500                 |

**SARA 311/312 Hazards** : Fire Hazard  
 Acute Health Hazard

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

dichlorodimethylsilane 75-78-5 >= 90 - <= 100 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

## Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

## US State Regulations

### Massachusetts Right To Know

dichlorodimethylsilane 75-78-5

### Pennsylvania Right To Know

dichlorodimethylsilane 75-78-5

### Maine Chemicals of High Concern

Product does not contain any listed chemicals

### Vermont Chemicals of High Concern

Product does not contain any listed chemicals

### Washington Chemicals of High Concern

Product does not contain any listed chemicals

### The components of this product are reported in the following inventories:

US TSCA : All substances listed as active on the TSCA inventory

### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

---

## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)

US WEEL / CEIL : Ceiling

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -

Aldrich - 440272

Page 14 of 15

International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2025 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

Revision Date : 07/22/2026

US / EN