

**DIMETHYLCHLOROSILANE, 98%**

Safety Data Sheet SID4070.0

Date of issue: 26/11/2014

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Version: 3.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Substance
Physical state	: Liquid
Substance name	: DIMETHYLCHLOROSILANE, 98%
Product code	: SID4070.0
Formula	: C ₂ H ₇ ClSi
Synonyms	: CHLORODIMETHYLSILANE DIMETHYLSILYL CHLORIDE DIMETHYLMONOCHLOROSILANE CHLORODIMETHYLHYDROSILANE DIMETHYLCHLOROXYDROSILANE DIMETHYLHYDROCHLOROSILANE DIMETHYLHYDROSILYL CHLORIDE
Chemical family	: ORGANOCHLOROSILANE

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**GELEST, INC.**11 East Steel Road
Morrisville, PA 19067**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

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65933 Frankfurt**Germany**

T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM

info@gelestde.com - www.gelestde.com**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquids, Category 2	H225
Substances and Mixtures which, in contact with water, emit flammable gases, Category 1	H260
Acute toxicity (inhalation:vapour) Category 3	H331
Skin corrosion/irritation, Category 1A	H314
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.
H260 - In contact with water releases flammable gases which may ignite spontaneously.
H314 - Causes severe skin burns and eye damage.
H331 - Toxic if inhaled.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P223 - Do not allow contact with water.
P240 - Ground and bond container and receiving equipment.
P310 - Immediately call a POISON CENTER or doctor/physician
P501 - Dispose of contents/container to licensed waste disposal facility..

2.3. Other hazards

Other hazards not contributing to the classification

: Hydrogen chloride may be formed by reaction with water and moisture in air. The US OSHA PEL (TWA) for hydrogen chloride is 5 ppm.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type

: Mono-constituent

Name

: DIMETHYLCHLOROSILANE, 98%

CAS-No.

: 1066-35-9

EC-No.

: 213-912-0

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dimethylchlorosilane	(CAS-No.) 1066-35-9 (EC-No.) 213-912-0	98 - 100	Flam. Liq. 2, H225 Water-react. 1, H260 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact

: Wash with plenty of water/.... Get immediate medical advice/attention.

First-aid measures after eye contact

: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion

: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects

: Causes severe skin burns and eye damage.

Symptoms/effects after inhalation

: Toxic if inhaled. May cause respiratory irritation.

Symptoms/effects after skin contact

: Causes (severe) skin burns.

Symptoms/effects after eye contact

: Causes serious eye damage.

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Symptoms/effects after ingestion : May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Reacts violently with water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. In contact with water releases flammable gases which may ignite spontaneously. Irritating fumes of hydrogen chloride and organic acid vapors may develop when material is exposed to water or open flame.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Use only non-sparking tools.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Do not allow contact with water. Ground/bond container and receiving equipment. Handle under inert gas. Protect from moisture. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions : Keep in a cool place. Store locked up. Store in a dry place. Store in a closed container. Store in a well-ventilated place. Keep container tightly closed.

Incompatible materials : Acids. alcohols. Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Handle in an enclosing hood with exhaust ventilation.

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 94.62 g/mol
Colour	: Straw.
Odour	: Acrid. Similar to hydrogen chloride.
Odour threshold	: No data available
Refractive index	: 1.3827
pH	: No data available
Relative evaporation rate (butylacetate=1)	: > 1
Melting point	: No data available
Freezing point	: -111 °C
Boiling point	: 36 °C
Flash point	: -25 °C
Critical temperature	: 202
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour.
Vapour pressure	: > 100 mm Hg @ 20°C
Relative vapour density at 20 °C	: > 1
Relative density	: 0.868
% Volatiles	: 100 %
Solubility	: Reacts with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with water.

10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating hydrogen chloride.

10.4. Conditions to avoid

Heat. Sparks. Open flame.

10.5. Incompatible materials

Acids. alcohols. Oxidizing agent.

10.6. Hazardous decomposition products

Organic acid vapors. Hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if inhaled.

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ATE CLP (vapours)	3 mg/l/4h
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Dimethylchlorosilane (1066-35-9)

LC50 inhalation rat (ppm)	4478 ppm/1h
ATE CLP (gases)	8956 ppmv/4h
ATE CLP (vapours)	3 mg/l/4h
ATE CLP (dust,mist)	0.5 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns and eye damage.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : Toxic if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact : Causes (severe) skin burns.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

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12.6. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 2988
UN-No. (IMDG) : 2988
UN-No. (IATA) : 2988
UN-No. (ADN) : 2988
UN-No. (RID) : 2988

14.2. UN proper shipping name

Proper Shipping Name (ADR) : CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (IMDG) : CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (IATA) : Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.
Proper Shipping Name (ADN) : CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (RID) : CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
Transport document description (ADR) : UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLCHLOROSILANE), 4.3 (3+8), I, (B/E)
Transport document description (IMDG) : UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLCHLOROSILANE), 4.3 (3+8), I
Transport document description (IATA) : UN 2988 Chlorosilanes, water-reactive, flammable, corrosive, n.o.s. (DIMETHYLCHLOROSILANE), 4.3, I
Transport document description (ADN) : UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLCHLOROSILANE), 4.3 (3+8), I
Transport document description (RID) : UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLCHLOROSILANE), 4.3 (3+8), I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 4.3 (3, 8)
Danger labels (ADR) : 4.3, 3, 8



IMDG

Transport hazard class(es) (IMDG) : 4.3 (3, 8)
Danger labels (IMDG) : 4.3, 3, 8



IATA

Transport hazard class(es) (IATA) : 4.3 (3, 8)

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Hazard labels (IATA) : 4.3, 3, 8



ADN

Transport hazard class(es) (ADN) : 4.3 (3, 8)

Danger labels (ADN) : 4.3, 3, 8



RID

Transport hazard class(es) (RID) : 4.3 (3, 8)

Danger labels (RID) : 4.3, 3, 8



14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : I

Packing group (ADN) : I

Packing group (RID) : I

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : WFC

Special provisions (ADR) : 549

Limited quantities (ADR) : 0

Excepted quantities (ADR) : E0

Packing instructions (ADR) : P401

Special packing provisions (ADR) : RR7

Mixed packing provisions (ADR) : MP2

Portable tank and bulk container instructions (ADR) : T14

Portable tank and bulk container special provisions (ADR) : TP2, TP7

Tank code (ADR) : L10DH

Tank special provisions (ADR) : TU14, TU26, TE21, TM2, TM3

Vehicle for tank carriage : FL

Transport category (ADR) : 0

Special provisions for carriage - Packages (ADR) : V1

Special provisions for carriage - Loading, unloading and handling (ADR) : CV23

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Special provisions for carriage - Operation (ADR) : S2, S20

Hazard identification number (Kemler No.) : X338

Orange plates :

X338

2988

Tunnel restriction code (ADR) : B/E

EAC code : 4WE

APP code : A(fl)

- Transport by sea

Packing instructions (IMDG) : P401

Special packing provisions (IMDG) : PP31

Tank instructions (IMDG) : T14

Tank special provisions (IMDG) : TP2, TP7, TP13

EmS-No. (Fire) : F-G

EmS-No. (Spillage) : S-N

Stowage category (IMDG) : D

Stowage and handling (IMDG) : SW2, H1

Segregation (IMDG) : SG5, SG7, SG8, SG13, SG25, SG26

Properties and observations (IMDG) : Colourless, very volatile liquids, flammable and corrosive, with a pungent odour. Immiscible with water. React violently with water or steam to produce heat which may lead to self-ignition; toxic and corrosive fumes will be evolved. May react vigorously in contact with oxidizing substances. Cause burns to skin, eyes and mucous membranes.

- Air transport

PCA Excepted quantities (IATA) : E0

PCA Limited quantities (IATA) : Forbidden

PCA limited quantity max net quantity (IATA) : Forbidden

PCA packing instructions (IATA) : Forbidden

PCA max net quantity (IATA) : Forbidden

CAO packing instructions (IATA) : 480

CAO max net quantity (IATA) : 1L

ERG code (IATA) : 4FW

- Inland waterway transport

Classification code (ADN) : WFC

Special provisions (ADN) : 549

Limited quantities (ADN) : 0

Excepted quantities (ADN) : E0

Equipment required (ADN) : PP, EP, EX, A

Ventilation (ADN) : VE01

Provisions for handling and stowage of the cargo (ADN) : HA08

Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : WFC

Special provisions (RID) : 549

Limited quantities (RID) : 0

Excepted quantities (RID) : E0

Packing instructions (RID) : P401

Special packing provisions (RID) : RR7

Mixed packing provisions (RID) : MP2

Portable tank and bulk container instructions (RID) : T14

Portable tank and bulk container special provisions (RID) : TP2, TP7

Tank codes for RID tanks (RID) : L10DH

Special provisions for RID tanks (RID) : TU14, TU26, TU38, TE21, TE22, TM2, TM3

Transport category (RID) : 0

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Special provisions for carriage – Packages (RID) : W1
Special provisions for carriage - Loading, unloading and handling (RID) : CW23
Hazard identification number (RID) : X338

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

DIMETHYLCHLOROSILANE, 98% is not on the REACH Candidate List

DIMETHYLCHLOROSILANE, 98% is not on the REACH Annex XIV List

DIMETHYLCHLOROSILANE, 98% is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

DIMETHYLCHLOROSILANE, 98% is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

% Volatiles : 100 %

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 557)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A

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STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
Water-react. 1	Substances and Mixtures which, in contact with water, emit flammable gases, Category 1
H225	Highly flammable liquid and vapour.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

SDS EU (REACH Annex II) - Custom

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