SIV9084.0 - VINYL METHYL DICHLOROSILANE

VINYL METHYL DICHLOROSILANE
Safety Data Sheet SIV9084.0
Date of issue: 25/11/2014  Revision date: 08/04/2019  Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form: Substance
Physical state: Liquid
Substance name: VINYL METHYL DICHLOROSILANE
Product code: SIV9084.0
Formula: C₃H₆Cl₂Si
Synonyms: DICHLOROVINYLMETHYLSILANE; METHYLVINYLDICHLOROSILANE; DICHLOROETHENYLMETHYLSILANE
Chemical family: CHLOROSILANE

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
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
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
Skin corrosion/irritation, Category 1B H314
Serious eye damage/eye irritation, Category 1 H318
Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects
No additional information available

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.
H314 - Causes severe skin burns and eye damage.
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.
- P240 - Ground/bond container and receiving equipment.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients
3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC No. 1272/2008 [CLP])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinylmethyldichlorosilane</td>
<td>(CAS-No.) 124-70-9</td>
<td>97 - 100</td>
<td>Flam. Liq. 2, H225 Skin Corr. 1B, H314 Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 204-710-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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. Get medical advice/attention.

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: May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
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.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures
5.1. Extinguishing media

Unsuitable extinguishing media: Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Highly flammable liquid and vapour. 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: Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.
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: Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper 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

Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. 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.

Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapour and mist. Provide good ventilation in process area to prevent formation of vapour. Containers must be properly grounded before beginning transfer. Take precautionary measures against static discharge. Use only non-sparking tools.

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions: 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Vinylmethyldichlorosilane (124-70-9)

<table>
<thead>
<tr>
<th>Country</th>
<th>OEL TWA (mg/m³)</th>
<th>OEL STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romania</td>
<td>3 mg/m³</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Provide local exhaust or general room 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 or face shield. Contact lenses should not be worn

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
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**: Liquid.
- **Molecular mass**: 141.07 g/mol
- **Colour**: Straw. Amber.
- **Odour**: Acrid. Similar to hydrogen chloride.
- **Odour threshold**: No data available
- **Refractive index**: 1.427
- **pH**: No data available
- **Relative evaporation rate (butylacetate=1)**: No data available
- **Melting point**: No data available
- **Freezing point**: -78 °C
- **Boiling point**: 92 - 93 °C
- **Flash point**: 4 °C
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Flammability (solid, gas)**: Highly flammable liquid and vapour.
- **Vapour pressure**: < 150 mm Hg @ 20°C
- **Relative vapour density at 20 °C**: > 1
- **Relative density**: 1.087
- **% Volatiles**: 100 %
- **Solubility**: Reacts with water.
- **Log Pow**: No data available
- **Log Kow**: No data available
- **Viscosity, kinematic**: 0.7 cSt
- **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

**SECTION 10: Stability and reactivity**

10.1. **Reactivity**

No additional information available

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. Open flame. Sparks.

10.5. **Incompatible materials**

Acids. alcohols. Oxidizing agent.

10.6. **Hazardous decomposition products**


**SECTION 11: Toxicological information**

11.1. **Information on toxicological effects**

- **Acute toxicity**: Not classified

<table>
<thead>
<tr>
<th>Vinylnmethyldichlorosilane (124-70-9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 intraperitoneal mouse</td>
<td>270 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/effects after inhalation: May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
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.
Reason for classification: Expert judgment

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

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
Product/Packaging disposal recommendations: May be incinerated. 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) : 2985
UN-No. (IMDG) : 2985
UN-No. (IATA) : 2985
UN-No. (ADN) : 2985
UN-No. (RID) : 2985

14.2. UN proper shipping name
Proper Shipping Name (ADR) : CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (IMDG) : CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (IATA) : Chlorosilanes, flammable, corrosive, n.o.s.
Proper Shipping Name (ADN) : CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (RID) : CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S.
Transport document description (ADR) : UN 2985 CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S. (VINYL METHYLDICHLOROSILANE), 3 (8), II, (D/E)
Transport document description (IMDG) : UN 2985 CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S. (VINYL METHYLDICHLOROSILANE), 3 (8), II
Transport document description (IATA) : UN 2985 Chlorosilanes, flammable, corrosive, n.o.s. (VINYL METHYLDICHLOROSILANE), 3 (8), II
### 14.3. Transport hazard class(es)

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

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

**IATA**
- Transport hazard class(es) (IATA) : 3 (8)
- Hazard labels (IATA) : 3, 8

**ADN**
- Transport hazard class(es) (ADN) : 3 (8)
- Danger labels (ADN) : 3, 8

**RID**
- Transport hazard class(es) (RID) : 3 (8)
- Danger labels (RID) : 3, 8

### 14.4. Packing group

- Packing group (ADR) : II
- Packing group (IMDG) : II
- Packing group (IATA) : II
- Packing group (ADN) : II
- Packing group (RID) : II
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): FC
  Special provisions (ADR): 548
  Limited quantities (ADR): 0
  Excepted quantities (ADR): E0
  Packing instructions (ADR): P010
  Mixed packing provisions (ADR): MP19
  Portable tank and bulk container instructions (ADR): T14
  Portable tank and bulk container special provisions (ADR): TP2, TP7, TP27
  Tank code (ADR): L4BH
  Vehicle for tank carriage: FL
  Transport category (ADR): 2
  Special provisions for carriage - Operation (ADR): S2, S20
  Hazard identification number (Kemler No.): X338
  Orange plates: X338 2985
  Tunnel restriction code (ADR): D/E
  EAC code: 4WE
  APP code: A(II)

- Transport by sea
  Limited quantities (IMDG): 0
  Excepted quantities (IMDG): E0
  Packing instructions (IMDG): P010
  Tank instructions (IMDG): T14
  Tank special provisions (IMDG): TP2, TP7, TP13, TP27
  EmS-No. (Fire): F-E
  EmS-No. (Spillage): S-C
  Stowage category (IMDG): B
  Stowage and handling (IMDG): SW2
  Properties and observations (IMDG): White or slightly yellowish deliquescent crystals or sticks. Soluble in water. Mixtures with combustible material are readily ignited and may burn fiercely. Mixtures with ammonium compounds or cyanides may explode. Harmful if swallowed.

- 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): 377
  CAO max net quantity (IATA): 5L
  ERG code (IATA): 3C

- Inland waterway transport
  Classification code (ADN): FC
  Special provisions (ADN): 548
  Limited quantities (ADN): 0
  Excepted quantities (ADN): E0
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Equipment required (ADN) : PP, EP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport
Classification code (RID) : FC
Special provisions (RID) : 548
Limited quantities (RID) : 0
Excepted quantities (RID) : E0
Packing instructions (RID) : P010
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T14
Portable tank and bulk container special provisions (RID) : TP2, TP7, TP27
Tank codes for RID tanks (RID) : L4BH
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
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
VINYLMETHYLDICHLOROSILANE is not on the REACH Candidate List
VINYLMETHYLDICHLOROSILANE is not on the REACH Annex XIV List
VINYLMETHYLDICHLOROSILANE 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.

% 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)

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
Class for fire hazard : Class I-1
Store unit : 1 liter
Classification remarks : F <Flam. Liq. 2>; 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:

<table>
<thead>
<tr>
<th>H- or EUH-</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

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