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

1.1. Product identifier

Product form: Substance
Physical state: Gas
Substance name: DIMETHYLSILANE
Product code: SID4230.0
Formula: C2H8Si
Synonyms: DIMETHYLSILYLDIHYDRIDE
Chemical family: ORGANOHYDRIDOSILANE

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 gases, Category 1          H220
Gases under pressure : Liquefied gas     H280
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): H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
Precautionary statements (CLP): P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.
P403 - Store in a well-ventilated place.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

---

### 2.3. Other hazards
No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>モノ-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>DIMETHYLSILANE</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>1111-74-6</td>
</tr>
<tr>
<td>EC-No.</td>
<td>214-184-7</td>
</tr>
</tbody>
</table>

<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>Dimethylsilane</td>
<td>(CAS-No.) 1111-74-6</td>
<td>95 - 100</td>
<td>Flam. Gas 1, H220 Press. Gas (Liq.), H280</td>
</tr>
</tbody>
</table>

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. If you feel unwell, seek medical advice.

- **First-aid measures after skin contact**: Wash with plenty of water/….

- **First-aid measures after eye contact**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get 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 after inhalation**: May cause irritation to the respiratory tract.

- **Symptoms/effects after skin contact**: May cause skin irritation.

- **Symptoms/effects after eye contact**: May cause eye irritation.

- **Symptoms/effects after ingestion**: No information available.

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

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

#### 5.2. Special hazards arising from the substance or mixture

- **Fire hazard**: Extremely flammable gas. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

- **Explosion hazard**: Contains gas under pressure; may explode if heated.

#### 5.3. Advice for firefighters

- **Firefighting instructions**: If material is ignited, allow to burn. Use water spray to cool exposed surfaces. Eliminate all ignition sources if safe to do so. Exercise caution when fighting any chemical fire.

- **Protection during firefighting**: Do not breathe fumes from fires or vapours from decomposition. Fire fighters must wear positive pressure self-contained breathing apparatus.

### 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.
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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
No additional information available

6.3. Methods and material for containment and cleaning up
No additional information available

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
: Flammable gas. Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling
: Handle only in sealed purged systems. Containers must be properly grounded before beginning transfer. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures
: Wash contaminated clothing before reuse. Wash hands thoroughly after handling.

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
: 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
DIMETHYLSILANE (1111-74-6)
<table>
<thead>
<tr>
<th></th>
<th>Australia TWA (mg/m³)</th>
<th>Australia TWA (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.63 mg/m³</td>
<td>0.2 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Handle in an enclosing hood with exhaust ventilation.

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state
: Gas
Appearance
: Colorless gas.
Molecular mass
: 60.17 g/mol
Colour
: No data available
Odour
Odour threshold
: No data available
### DIMETHYLSILANE

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#### Refractive index
- No additional information available

#### pH
- No data available

#### Relative evaporation rate (butylacetate=1)
- > 1

#### Melting point
- -150 °C

#### Freezing point
- No data available

#### Boiling point
- -20 °C

#### Flash point
- < -40 °C

#### Auto-ignition temperature
- No data available

#### Decomposition temperature
- No data available

#### Flammability (solid, gas)
- Extremely flammable gas.

#### Vapour pressure
- 30 atm @ -80°C

#### Relative vapour density at 20 °C
- > 1

#### Relative density
- 0.68

#### % Volatiles
- 100 %

#### Solubility
- Insoluble in 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

<table>
<thead>
<tr>
<th>Gas group</th>
<th>Press. Gas (Liq.)</th>
</tr>
</thead>
</table>

### 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
- Can liberate hydrogen in the presence of precious metals (platinum or palladium) and Lewis acids (aluminum chloride etc.).

#### 10.4. Conditions to avoid

#### 10.5. Incompatible materials
- Oxidizing agent.

#### 10.6. Hazardous decomposition products
- Organic acid vapors.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</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>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>May cause irritation to the respiratory tract.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>May cause skin irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after ingestion</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
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 : 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) : 3161
UN-No. (IMDG) : 3161
UN-No. (IATA) : 3161
UN-No. (ADN) : 3161
UN-No. (RID) : 3161

14.2. UN proper shipping name
Proper Shipping Name (ADR) : LIQUEFIED GAS, FLAMMABLE, N.O.S.
Proper Shipping Name (IMDG) : LIQUEFIED GAS, FLAMMABLE, N.O.S.
Proper Shipping Name (IATA) : Liquefied gas, flammable, n.o.s.
Proper Shipping Name (ADN) : LIQUEFIED GAS, FLAMMABLE, N.O.S.
Proper Shipping Name (RID) : LIQUEFIED GAS, FLAMMABLE, N.O.S.
Transport document description (ADR) : UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (DIMETHYLSILANE), 2.1, (B/D)
Transport document description (IMDG) : UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (DIMETHYLSILANE), 2.1
Transport document description (IATA) : UN 3161 Liquefied gas, flammable, n.o.s. (DIMETHYLSILANE), 2.1
Transport document description (ADN) : UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (DIMETHYLSILANE), 2.1
Transport document description (RID) : UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (DIMETHYLSILANE), 2.1

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR) : 2.1
Danger labels (ADR) : 2.1

IMDG
Transport hazard class(es) (IMDG) : 2.1
**DIMETHYLSILANE**

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<table>
<thead>
<tr>
<th>Table: 14.4. Packing group</th>
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</thead>
<tbody>
<tr>
<td>Packing group (ADR)</td>
</tr>
<tr>
<td>Packing group (IMDG)</td>
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<td>Packing group (IATA)</td>
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<tr>
<td>Packing group (ADN)</td>
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<tr>
<td>Packing group (RID)</td>
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</table>

<table>
<thead>
<tr>
<th>Table: 14.5. Environmental hazards</th>
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<tbody>
<tr>
<td>Dangerous for the environment</td>
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<tr>
<td>Marine pollutant</td>
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<tr>
<td>Other information</td>
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<table>
<thead>
<tr>
<th>Table: 14.6. Special precautions for user</th>
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<tbody>
<tr>
<td><strong>- Overland transport</strong></td>
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<tr>
<td>Classification code (ADR)</td>
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<tr>
<td>Special provisions (ADR)</td>
</tr>
<tr>
<td>Limited quantities (ADR)</td>
</tr>
<tr>
<td>Excepted quantities (ADR)</td>
</tr>
<tr>
<td>Packing instructions (ADR)</td>
</tr>
<tr>
<td>Mixed packing provisions (ADR)</td>
</tr>
<tr>
<td>Portable tank and bulk container instructions (ADR)</td>
</tr>
<tr>
<td>Tank code (ADR)</td>
</tr>
</tbody>
</table>
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Tank special provisions (ADR) : TA4, TT9
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 23
Orange plates

Tunnel restriction code (ADR) : B/D
EAC code : 2YE

- Transport by sea
Special provisions (IMDG) : 274
Limited quantities (IMDG) : 0
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P200
Tank instructions (IMDG) : T50
EmS-No. (Fire) : F-D
EmS-No. (Spillage) : S-U
Stowage category (IMDG) : D
Stowage and handling (IMDG) : SW2

- 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) : 200
CAO max net quantity (IATA) : 150kg
Special provisions (IATA) : A1
ERG code (IATA) : 10L

- Inland waterway transport
Classification code (ADN) : 2F
Special provisions (ADN) : 274
Limited quantities (ADN) : 0
Excepted quantities (ADN) : E0
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport
Special provisions (RID) : 274, 662
Limited quantities (RID) : 0
Excepted quantities (RID) : E0
Packing instructions (RID) : P200
Mixed packing provisions (RID) : MP9
Portable tank and bulk container instructions (RID) : T50(M)
Tank codes for RID tanks (RID) : PxBN(M)
Special provisions for RID tanks (RID) : TU38, TE22, TA4, TT9, TM6
Transport category (RID) : 2
Special provisions for carriage - Loading, unloading and handling (RID) : CW9, CW10, CW36
Colis express (express parcels) (RID) : CE3
Hazard identification number (RID) : 23
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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
DIMETHYLSILANE is not on the REACH Candidate List
DIMETHYLSILANE is not on the REACH Annex XIV List
DIMETHYLSILANE 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. 567)

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. Gas 1; Press. Gas (Liq.); 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:
Flam. Gas 1 : Flammable gases, Category 1
Press. Gas (Liq.) : Gases under pressure : Liquefied gas
H220 : Extremely flammable gas.
H280 : Contains gas under pressure; may explode if heated.