

**DIMETHYLDIFLUOROSILANE**

Safety Data Sheet SID4122.0

Date of issue: 14/04/2016

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Version: 1.1

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

Product form	: Substance
Physical state	: Gas
Substance name	: DIMETHYLDIFLUOROSILANE
Product code	: SID4122.0
Formula	: C <sub>2</sub> H <sub>6</sub> F <sub>2</sub> Si
Synonyms	: DIFLUORODIMETHYLSILANE
Chemical family	: ORGANOFLUOROSILANE

**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](mailto:info@gelest.com) - [www.gelest.com](http://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](mailto:info@gelestde.com) - [www.gelestde.com](http://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 : Compressed gas	H280
Acute toxicity (inhalation:gas) Category 3	H331
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) :



GHS02



GHS05



GHS06

Signal word (CLP) : Danger

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Hazard statements (CLP)	: H220 - Extremely flammable gas. H280 - Contains gas under pressure; may explode if heated. H314 - Causes severe skin burns and eye damage. H331 - Toxic if inhaled.
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. P260 - Do not breathe gas. P264 - Wash hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P310 - Immediately call a POISON CENTER or doctor/physician

### 2.3. Other hazards

Other hazards not contributing to the classification	: Hydrogen fluoride may be formed by reaction with water and moisture in air. The US OSHA PEL (TWA) for hydrogen fluoride is 3 ppm.
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## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type	: Mono-constituent
Name	: DIMETHYLDIFLUOROSILANE
CAS-No.	: 353-66-2
EC-No.	: 206-540-5

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dimethyldifluorosilane	(CAS-No.) 353-66-2 (EC-No.) 206-540-5	97 - 100	Flam. Gas 1, H220 Press. Gas (Comp.), H280 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318

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	: Flush with water, then wash with soap and water. Dust with baking soda and then rewash. 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 if you feel unwell.

### 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 irritation to the respiratory tract. Danger of serious damage to health by prolonged exposure through inhalation.
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

NOTE TO PHYSICIAN: Under conditions of severe skin exposure, therapies with calcium gluconate injections similar to that recommended hydrofluoric acid contact may be considered.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Alcohol-resistant foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	: Do not use straight streams.

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

- Fire hazard : Extremely flammable gas. Irritating fumes of hydrogen fluoride and organic acid vapors may develop when material is exposed to water or open flame.
- Explosion hazard : Contains gas under pressure; may explode if heated.

### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Eliminate all ignition sources if safe to do so. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Use water spray to cool exposed surfaces.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe gas.

## 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. Sweep or shovel spills into appropriate container for disposal.

### 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 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe gas. 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

- Storage conditions : Keep container tightly closed. Keep in a cool place. Protect from sunlight. Store in a well-ventilated place. Store locked up.
- Incompatible materials : Acids. alcohols. Moisture. Oxidizing agent. Water.
- Storage area : Store away from heat.

### 7.3. Specific end use(s)

- No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Dimethyldifluorosilane (353-66-2)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup> for fluoride

### 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.

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### 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:

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	: Gas
Appearance	: Compressed gas or liquid.
Molecular mass	: 96.15 g/mol
Colour	: No data available
Odour	: Acrid. Hydrogen fluoride.
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: -88 °C
Boiling point	: 2 - 3 °C
Flash point	: < 0 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable gas.
Vapour pressure	: 2.8 atm @ 20°C
Relative vapour density at 20 °C	: > 1
Relative density	: 1.06
% 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

Gas group : Compressed gas

## 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 fluoride.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Acids. alcohols. Moisture. Oxidizing agent. Water.

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### 10.6. Hazardous decomposition products

Hydrogen fluoride. Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Toxic if inhaled.

#### DIMETHYLDIFLUOROSILANE (353-66-2)

ATE CLP (gases)	700 ppmv/4h
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#### Dimethyldifluorosilane (353-66-2)

ATE CLP (gases)	700 ppmv/4h
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ATE CLP (vapours)	3 mg/l/4h
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ATE CLP (dust,mist)	0.5 mg/l/4h
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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  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Symptoms/effects after inhalation : Toxic if inhaled. May cause irritation to the respiratory tract. Danger of serious damage to health by prolonged exposure through inhalation.  
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

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

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### 14.1. UN number

UN-No. (ADR)	: 3305
UN-No. (IMDG)	: 3305
UN-No. (IATA)	: 3305
UN-No. (ADN)	: 3305
UN-No. (RID)	: 3305

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (IMDG)	: COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (IATA)	: Compressed gas, toxic, flammable, corrosive, n.o.s.
Proper Shipping Name (ADN)	: COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (RID)	: COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
Transport document description (ADR)	: UN 3305 COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLDIFLUOROSILANE), 2.3 (2.1+8), (B/D)
Transport document description (IMDG)	: UN 3305 COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLDIFLUOROSILANE), 2.3 (2.1+8)
Transport document description (IATA)	: UN 3305 Compressed gas, toxic, flammable, corrosive, n.o.s. (DIMETHYLDIFLUOROSILANE), 2.3
Transport document description (ADN)	: UN 3305 COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLDIFLUOROSILANE), 2.3 (2.1+8)
Transport document description (RID)	: UN 3305 COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S. (DIMETHYLDIFLUOROSILANE), 2.3 (2.1+8)

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 2.3 (2.1, 8)
Danger labels (ADR)	: 2.3, 2.1, 8



#### IMDG

Transport hazard class(es) (IMDG)	: 2.3 (2.1, 8)
Danger labels (IMDG)	: 2.3, 2.1, 8



#### IATA

Transport hazard class(es) (IATA)	: 2.3 (2.1, 8)
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#### ADN

Transport hazard class(es) (ADN)	: 2.3 (2.1, 8)
Danger labels (ADN)	: 2.3, 2.1, 8



#### RID

Transport hazard class(es) (RID)	: 2.3 (2.1, 8)
Danger labels (RID)	: 2.3, 2.1, 8



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### 14.4. Packing group



Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

### 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)	: 1TFC
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P200
Mixed packing provisions (ADR)	: MP9
Portable tank and bulk container instructions (ADR)	: (M)
Tank code (ADR)	: CxBH(M)
Tank special provisions (ADR)	: TU6, TA4, TT9
Vehicle for tank carriage	: FL
Transport category (ADR)	: 1
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV9, CV10, CV36
Special provisions for carriage - Operation (ADR)	: S2, S14
Hazard identification number (Kemler No.)	: 263
Orange plates	:  
Tunnel restriction code (ADR)	: B/D
EAC code	: 2PE
APP code	: A(fg)

#### - Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P200
EmS-No. (Fire)	: F-D
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SG4, SG9

#### - Air transport

PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden

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CAO packing instructions (IATA)	: Forbidden
CAO max net quantity (IATA)	: Forbidden
Special provisions (IATA)	: A2
ERG code (IATA)	: 10C

### - Inland waterway transport

Classification code (ADN)	: 1TFC
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EP, EX, TOX, A
Ventilation (ADN)	: VE01, VE02
Number of blue cones/lights (ADN)	: 2

### - Rail transport

Classification code (RID)	: 1TFC
Special provisions (RID)	: 274
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P200
Mixed packing provisions (RID)	: MP9
Portable tank and bulk container instructions (RID)	: (M)
Tank codes for RID tanks (RID)	: CxBH(M)
Special provisions for RID tanks (RID)	: TU6, TU38, TE22, TE25, TA4, TT9
Transport category (RID)	: 1
Special provisions for carriage - Loading, unloading and handling (RID)	: CW9, CW10, CW36
Hazard identification number (RID)	: 263

### 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

DIMETHYLDIFLUOROSILANE is not on the REACH Candidate List

DIMETHYLDIFLUOROSILANE is not on the REACH Annex XIV List

DIMETHYLDIFLUOROSILANE 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.

DIMETHYLDIFLUOROSILANE 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

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



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### Denmark

Class for fire hazard : Class I-1  
Store unit : 1 liter  
Classification remarks : F+ <Flam. Gas 1; Press. Gas (Comp.)>; 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:gas)	Acute toxicity (inhalation:gas) Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Gas 1	Flammable gases, Category 1
Press. Gas (Comp.)	Gases under pressure : Compressed gas
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.

### SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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