1. Identification

**Product Name**: 1,1,1,3,3,3-Hexamethyldisilazane

**Cat No.**
- AC120580000; AC120580025; AC120580100; AC120581000; AC120585000

**CAS No**: 999-97-3

**Synonyms**: HMDS

**Recommended Use**: Laboratory chemicals.

**Uses advised against**: Food, drug, pesticide or biocidal product use.

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2. Hazard(s) identification

**Classification**
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>Category 4</td>
</tr>
</tbody>
</table>

**Label Elements**

**Signal Word**: Danger

**Hazard Statements**
- Highly flammable liquid and vapor
- Toxic in contact with skin
Harmful if swallowed or if inhaled

Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Skin
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Fire
In case of fire: Use CO2, dry chemical, or foam for extinction
Storage
Store locked up
Store in a well-ventilated place. Keep cool
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Harmful to aquatic life with long lasting effects

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>999-97-3</td>
<td>&lt;=100</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
**1,1,1,3,3,3-Hexamethyldisilazane**

**Revision Date** 24-Dec-2021

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**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**
If not breathing, give artificial respiration. Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Ingestion**
Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms and effects**
None reasonably foreseeable. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

**Notes to Physician**
Treat symptomatically.

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### 5. Fire-fighting measures

**Suitable Extinguishing Media**
Water mist may be used to cool closed containers. CO₂, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable Extinguishing Media**
No information available

**Flash Point**
20 °C / 68 °F

**Method**
No information available

**Autoignition Temperature**
325 °C / 617 °F

**Explosion Limits**
- **Upper**: 16.3 vol %
- **Lower**: 0.8 vol %

**Sensitivity to Mechanical Impact**
No information available

**Sensitivity to Static Discharge**
No information available

**Specific Hazards Arising from the Chemical**
Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Containers may explode when heated. Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

**Hazardous Combustion Products**
Carbon monoxide (CO). Carbon dioxide (CO₂).

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

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### 6. Accidental release measures

**NFPA**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Personal Precautions**
Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**
Should not be released into the environment. Do not flush into surface water or sanitary sewer system.
7. Handling and storage

Handling
Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Handle under an inert atmosphere. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Storage.

8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-78 °C / -108.4 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>125 °C / 257 °F @ 760 mmHg</td>
</tr>
<tr>
<td>Flash Point</td>
<td>20 °C / 68 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>16.3 vol %</td>
</tr>
<tr>
<td>Lower</td>
<td>0.8 vol %</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>20 hPa @ 20 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>4.6</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.760</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water reactive</td>
</tr>
</tbody>
</table>
Partition coefficient; n-octanol/water  No data available
Autoignition Temperature  325 °C / 617 °F
Decomposition Temperature  No information available
Viscosity  0.9 cSt at 25 °C
Molecular Formula  C6 H19 N Si2
Molecular Weight  161.4

10. Stability and reactivity

Reactive Hazard  None known, based on information available
Stability  Stable under normal conditions. Moisture sensitive.
Conditions to Avoid  Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moist air or water.
Incompatible Materials  Strong oxidizing agents, Water
Hazardous Decomposition Products  Carbon monoxide (CO), Carbon dioxide (CO₂)
Hazardous Polymerization  Hazardous polymerization does not occur.
Hazardous Reactions  None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information
Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th></th>
<th>LD50 Dermal</th>
<th></th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>LD50 = 813 mg/kg (Rat)</td>
<td></td>
<td>LD50 = 1350 mg/kg (Rabbit)</td>
<td></td>
<td>LC50 = 1516 ppm (Rat) 6 h</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation  Causes burns by all exposure routes
Sensitization  No information available
Carcinogenicity  The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>999-97-3</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects  Not mutagenic in AMES Test
Reproductive Effects  No information available.
Developmental Effects  No information available.
Teratogenicity  No information available.
STOT - single exposure  None known
STOT - repeated exposure  None known
Aspiration hazard  No information available
Symptoms / effects, both acute and delayed  Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be
investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and
danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

#### 12. Ecological information

**Ecotoxicity**
The product contains following substances which are hazardous for the environment. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Reacts with water so no ecotoxicity data for the substance is available.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilizane</td>
<td>Not listed</td>
<td>Pimephales promelas: LC50: 167 mg/L 96h</td>
<td>Not listed</td>
<td>EC50: 186 mg/L 48h</td>
</tr>
</tbody>
</table>

**Persistence andDegradability** Persistence is unlikely based on information available.

**Bioaccumulation/Accumulation** No information available.

**Mobility** Is not likely mobile in the environment.

#### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

#### 14. Transport information

**DOT**

- **UN-No** UN1992
- **Proper Shipping Name** FLAMMABLE LIQUIDS, TOXIC, N.O.S.
- **Technical Name** Hexamethyldisilizane
- **Hazard Class** 3
- **Subsidiary Hazard Class** 6.1
- **Packing Group** II

**TDG**

- **UN-No** UN1992
- **Proper Shipping Name** FLAMMABLE LIQUID, TOXIC, N.O.S.
- **Hazard Class** 3
- **Subsidiary Hazard Class** 6.1
- **Packing Group** II

**IATA**

- **UN-No** UN1992
- **Proper Shipping Name** FLAMMABLE LIQUID, TOXIC, N.O.S.
- **Hazard Class** 3
- **Subsidiary Hazard Class** 6.1
- **Packing Group** II

**IMDG/IMO**

- **UN-No** UN1992
- **Proper Shipping Name** FLAMMABLE LIQUID, TOXIC, N.O.S.
- **Hazard Class** 3
- **Subsidiary Hazard Class** 6.1
- **Packing Group** II

#### 15. Regulatory information

**United States of America Inventory**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active-Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
</table>
Legend:
TSCA  US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>ISHL</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>999-97-3</td>
<td>X</td>
<td>-</td>
<td>213-668-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-34695</td>
</tr>
</tbody>
</table>

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313 Not applicable
SARA 311/312 Hazard Categories See section 2 for more information
CWA (Clean Water Act) Not applicable
Clean Air Act Not applicable
OSHA - Occupational Safety and Health Administration Not applicable
CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Serious risk, Grade 3

Authorisation/Restrictions according to EU REACH

Safety, health and environmental regulations/legislation specific for the substance or mixture
### Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS)
--- | --- | --- | --- | --- | ---
Hexamethyldisilazane | 999-97-3 | Listed | Not applicable | Not applicable | Not applicable

--- | --- | --- | --- | --- | ---
Hexamethyldisilazane | 999-97-3 | Not applicable | Not applicable | Not applicable | Not applicable

## 16. Other information

**Prepared By**
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

**Creation Date**
23-Apr-2010

**Revision Date**
24-Dec-2021

**Print Date**
24-Dec-2021

**Revision Summary**
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS