1. PRODUCT AND COMPANY IDENTIFICATION

Product Name 1,1,3,3,3-Hexamethyldisilazane
Cat No. AC430850000; AC430851000
Synonyms HMDS
Recommended Use Laboratory chemicals

2. HAZARDS IDENTIFICATION

Emergency Overview
Flammable liquid and vapor. Causes burns by all exposure routes. Harmful by inhalation, in contact with skin and if swallowed.

Appearance Colorless Physical State Liquid odor odorless

Target Organs Skin, Respiratory system, Eyes, Gastrointestinal tract (GI), Central nervous system (CNS), Heart
Acute Effects
Principal Routes of Exposure

- **Eyes**
  Causes burns.

- **Skin**
  Causes burns. Harmful in contact with skin.

- **Inhalation**
  Causes burns. Harmful by inhalation.

- **Ingestion**
  Causes burns. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects
May cause adverse liver effects. May cause central nervous system depression.
See Section 11 for additional toxicological information.

Aggravated Medical Conditions
No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hexamethyldisilazane</td>
<td>999-97-3</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

- **Eye Contact**
  Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

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

- **Inhalation**
  Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

- **Ingestion**
  Do not induce vomiting. Call a physician or Poison Control Center immediately.

- **Notes to Physician**
  Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

- **Flash Point**
  6°C / 42°F

- **Method**
  No information available.

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

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

- **Suitable Extinguishing Media**
  CO₂, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

- **Unsuitable Extinguishing Media**
  No information available.

- **Hazardous Combustion Products**
  No information available.
Sensitivity to mechanical impact
No information available.

Sensitivity to static discharge
No information available.

Specific Hazards Arising from the Chemical
Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

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.

NFPA  Health  1 Flammability  3 Instability  1 Physical hazards N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. 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.

Methods for Containment and Clean Up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Handling
Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Do not breathe vapors/dust. Do not ingest. Take precautionary measures against static discharges.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area. Corrosives area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

NIOSH IDLH: Immediately Dangerous to Life or Health

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.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Colorless
odor: odorless
Odor Threshold: No information available.
pH: No information available.
Vapor Pressure: 20 hPa @ 20 °C
Vapor Density: 4.6
Viscosity: 0.9 cSt at 25 °C
Boiling Point/Range: 125°C / 257°F
Melting Point/Range: -78°C / -108.4°F
Decomposition temperature: No information available.
Flash Point: 6°C / 42°F
Evaporation Rate: No information available.
Specific Gravity: 0.760
Solubility: Insoluble in water
log Pow: No data available
Molecular Weight: 161.4
Molecular Formula: C6 H19 N Si2

10. STABILITY AND REACTIVITY

Stability: 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
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

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral (Rat)</th>
<th>LD50 Dermal (Rabbit)</th>
<th>LC50 Inhalation (Dust)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>847 mg/kg</td>
<td>540 mg/kg (Rabbit)</td>
<td>8.7 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td></td>
<td></td>
<td>710 µL/kg (Rabbit)</td>
<td>8700 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1016 ppm (Rat) 1 h</td>
</tr>
</tbody>
</table>

Irritation: Causes burns by all exposure routes
Toxicologically Synergistic Products
No information available.

Chronic Toxicity

Carcinogenicity
There are no known carcinogenic chemicals in this product

Sensitization
No information available.

Mutagenic Effects
Not mutagenic in AMES Test

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

Other Adverse Effects
See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

Endocrine Disruptor Information
No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
Do not empty into drains. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<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>Hexamethyldisilazane</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 and Degradability
Not readily biodegradable.

Bioaccumulation/ Accumulation
No information available

Mobility
No information available

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
UN3286
14. TRANSPORT INFORMATION

Proper Shipping Name: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
Proper technical name: Hexamethyldisilizane
Hazard Class: 3
Subsidiary Hazard Class: 6.1; 8
Packing Group: II

TDG
UN-No: UN3286
Proper Shipping Name: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
Hazard Class: 3
Subsidiary Hazard Class: 6.1; 8
Packing Group: II

IATA
UN-No: UN3286
Proper Shipping Name: Flammable liquid, toxic, corrosive, n.o.s
Hazard Class: 3
Subsidiary Hazard Class: 6.1, 8
Packing Group: II

IMDG/IMO
UN-No: UN3286
Proper Shipping Name: Flammable liquid, toxic, corrosive, n.o.s
Hazard Class: 3
Subsidiary Hazard Class: 6.1, 8
Packing Group: II

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>CHINA</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilizane</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>213-668-5</td>
<td>-</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)  Not applicable

SARA 313
Not applicable

SARA 311/312 Hazardous Categorization

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

Clean Water Act
Not applicable

Clean Air Act
Not applicable

OSHA
Not applicable

CERCLA
Not Applicable

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

State Right-to-Know

<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

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
16. OTHER INFORMATION

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

Creation Date  23-Apr-2010
Print Date  31-Oct-2012
Revision Summary  (M)SDS sections updated 2 3 12

Disclaimer  The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of MSDS