MATERIAL SAFETY DATA SHEET
1,1,1,3,3,3-HEXAMETHYLDISILAZANE

1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: 1,1,1,3,3,3-Hexamethyldisilazane
Synonyms: HMDS
Company Identification: Sisco Research Laboratories Pvt. Ltd.
Andheri (East), Mumbai – 400 099.
Tel : +91 22 2687 2601
Fax : +91 22 2687 8241
Website : www.srlchem.com

2 - COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>999-97-3</td>
<td>1,1,1,3,3,3-Hexamethyldisilazane</td>
<td>98%</td>
<td>213-668-5</td>
</tr>
</tbody>
</table>

3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Causes burns. Moisture sensitive.

Potential Health Effects
Eye: Causes eye burns.
Skin: Harmful if absorbed through the skin. Causes skin burns.
Ingestion: Harmful if swallowed. Causes gastrointestinal tract burns. May cause nausea and vomiting.
Inhalation: Harmful if inhaled. Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

Chronic:

4 - FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
**Notes to Physician:** Treat symptomatically and supportively.

### 5 - FIRE FIGHTING MEASURES

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable liquid and vapor.

**Extinguishing Media:** Do NOT use water directly on fire. Use foam, dry chemical, or carbon dioxide.

### 6 - ACCIDENTAL RELEASE MEASURES

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool.

### 7 – HANDLING AND STORAGE

**Handling:** Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Use only in a chemical fume hood.

**Storage:** Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area. Store under nitrogen.

### 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

**Personal Protective Equipment**

<table>
<thead>
<tr>
<th>Eyes:</th>
<th>Wear chemical splash goggles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin:</td>
<td>Wear appropriate protective gloves to prevent skin exposure.</td>
</tr>
<tr>
<td>Clothing:</td>
<td>Wear appropriate protective clothing to prevent skin exposure.</td>
</tr>
<tr>
<td>Respirators:</td>
<td>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.</td>
</tr>
</tbody>
</table>

### 9 - PHYSICAL AND CHEMICAL PROPERTIES
Physical State: Liquid  
Boiling Point: 123-126 deg C  
Specific Gravity/Density: 0.773-0.775  
Molecular Formula: C₆H₁₉NSi₂  
Molecular Weight: 161.40

10 - STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, ignition sources, temperatures above 150°C, exposure to moist air or water.
Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, silicon dioxide, ammonia.
Hazardous Polymerization: Will not occur.

11 - TOXICOLOGICAL INFORMATION

RTECS#: CAS# 999-97-3: JM9230000
LD50/LC50:

RTECS:
CAS# 999-97-3: Dermal, guinea pig: LD50 = 1 ml/kg; Draize test, rabbit, skin: 500 uL Severe; Inhalation, mouse: LC50 = 12 gm/m3/2H; Inhalation, rat: LC50 = 8700 mg/m3/4H; Oral, mouse: LD50 = 850 mg/kg; Oral, rabbit: LD50 = 1100 mg/kg; Oral, rat: LD50 = 850 mg/kg; Skin, rabbit: LD50 = 710 ml/kg;

Carcinogenicity: 1,1,1,3,3,3-Hexamethyldisilazane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

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

12 - ECOLOGICAL INFORMATION

Not available

13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

14 - TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Shipping Name:</th>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Flammable Liquid, Toxic, Corrosive, N.O.S.</td>
<td>Flammable Liquid, Toxic, Corrosive, N.O.S.</td>
<td>Flammable Liquid, Toxic, Corrosive, N.O.S.</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>3 (6.1)</td>
<td>3 (6.1)</td>
<td>3 (6.1)</td>
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</table>
UN Number: 3286 3286 3286
Packing Group: II II II

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<tr>
<th>15 - REGULATORY INFORMATION</th>
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**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:** F C

**Risk Phrases:** R 11 Highly flammable. R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R 34 Causes burns.

**Safety Phrases:** S 16 Keep away from sources of ignition - No smoking. S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**WGK (Water Danger/Protection)**

Canada CAS# 999-97-3 is listed on Canada's DSL List

US Federal TSCA CAS# 999-97-3 is listed on the TSCA Inventory.

<table>
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<tr>
<th>16 - ADDITIONAL INFORMATION</th>
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