1,1,1,3,3,3-HEXAMETHYL DISILAZANE
FOR SYNTHESIS MSDS

CAS No: 999-97-3 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>: Sub stance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No</td>
<td>: 999-97-3</td>
</tr>
<tr>
<td>Product code</td>
<td>: 04047</td>
</tr>
<tr>
<td>Formula</td>
<td>: C₆H₁₉N₅Si₂</td>
</tr>
<tr>
<td>Synonyms</td>
<td>: HMDS, Bis-(trimethylsilyl) amine</td>
</tr>
</tbody>
</table>

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 | : Industrial. For professional use only |

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

| Emergency number | : + 91 22 6663 6663 (9:00am - 6:00 pm) |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

| Flammable liquids, Category 2 | H225 |
| Acute toxicity (oral), Category 4 | H302 |
| Acute toxicity (dermal), Category 3 | H311 |
| Acute toxicity (inhalation:gas) Category 3 | H331 |
| Skin corrosion/irritation, Category 1B | H314 |
| Hazardous to the aquatic environment — Chronic Hazard, Category 3 | H412 |

Full text of classification categories and H statements : see section 16
1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS
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Classification according to Directive 67/548/EEC or 1999/45/EC
F; R11
Xn; R20/21/22
C; R34
R52/53
Full text of R-phrases: 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

Hazard statements (CLP):
- H225 - Highly flammable liquid and vapour
- H302 - Harmful if swallowed
- H311+H331 - Toxic in contact with skin or if inhaled
- H314 - Causes severe skin burns and eye damage
- H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (CLP):
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
- P273 - Avoid release to the environment
- P280 - Wear protective gloves, protective clothing, eye protection, face protection
- P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a POISON CENTER/doctor/…

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name: 1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS
CAS No: 999-97-3

Full text of R- and H-phrases: see section 16
3.2. Mixture
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor/physician. Specific measures (see ... on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation: Toxic if inhaled.
Symptoms/injuries after skin contact: Toxic in contact with skin.
Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Highly flammable liquid and vapour.
Explosion hazard: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment.

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. No naked lights. No smoking.

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Use personal protective equipment as required.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Avoid release to the environment. Harmful to aquatic life with long lasting effects.
6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers. Collect spillage.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed: Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling: No naked lights. No smoking. Use only non-sparking tools. Do not breathe fume, dust, gas, vapours, spray. Avoid contact with skin and eyes.
Hygiene measures: Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Comply with applicable regulations.
Storage conditions: Keep in fireproof place. Keep container tightly closed. Store in original container.
Incompatible materials: Heat sources.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Hand protection: protective gloves
Eye protection: Chemical goggles or face shield
Skin and body protection: Wear suitable protective clothing
Respiratory protection: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Colour: Clear Colorless.
Odour: ammonia odour.
Odour threshold: No data available
pH: 8.5
Relative evaporation rate (butylacetate=1): < 1
Melting point: -80 °C
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Freezing point : No data available
Boiling point : 125 °C
Flash point : 11 °C
Auto-ignition temperature : 380 °C
Decomposition temperature : No data available
Flammability (solid, gas) : Flammable
Highly flammable liquid and vapour
Vapour pressure : 20 hPa at 20°C
Relative vapour density at 20 °C : 4.6
Relative density : No data available
Density : 0.77 g/cm³
Solubility : Water: Insoluble in water
Log Pow : 2.62
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : 0.8 - 16.3 vol %

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Thermal decomposition generates: Corrosive vapours.

10.2. Chemical stability
Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
May release flammable gases. Thermal decomposition generates: Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS
Safety Data Sheet

<table>
<thead>
<tr>
<th>Physical and Chemical Properties</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH: Skin corrosion/irritation</td>
<td>8.5</td>
</tr>
<tr>
<td>pH: Serious eye damage/irritation</td>
<td>8.5</td>
</tr>
<tr>
<td>pH: Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Potential adverse human health effects and symptoms: Harmful if swallowed. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - water: Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS (999-97-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS (999-97-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
</tr>
</tbody>
</table>

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
No additional information available
## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

| Product/Packaging disposal recommendations | : Dispose of contents/container to ... |
| Additional information | : Handle empty containers with care because residual vapours are flammable. |

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

| UN-No. (ADR) | 3286 |
| UN-No. (IMDG) | 3286 |
| UN-No. (IATA) | 3286 |
| UN-No. (ADN) | Not regulated |
| UN-No. (RID) | Not regulated |

### 14.2. UN proper shipping name

| Proper Shipping Name (ADR) | FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. |
| Proper Shipping Name (IMDG) | FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. |
| Proper Shipping Name (IATA) | FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. |
| Proper Shipping Name (ADN) | Not regulated |
| Proper Shipping Name (RID) | Not regulated |

| Transport document description (ADR) | UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S., 3 (6.1+8), II, (D/E) |
| Transport document description (IMDG) | UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S., 3 (6.1+8), II |
| Transport document description (IATA) | UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S., 3 (6.1+8), II |

### 14.3. Transport hazard class(es)

#### ADR

| Transport hazard class(es) (ADR) | 3 (6.1, 8) |
| Danger labels (ADR) | 3, 6.1, 8 |

#### IMDG

| Transport hazard class(es) (IMDG) | 3 (6.1, 8) |
| Danger labels (IMDG) | 3, 6.1, 8 |

#### IATA

| Transport hazard class(es) (IATA) | 3 (6.1, 8) |
| Hazard labels (IATA) | 3, 6.1, 8 |
ADN
Transport hazard class(es) (ADN) : Not regulated

RID
Transport hazard class(es) (RID) : Not regulated

14.4. Packing group
Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : Not regulated
Packing group (RID) : Not regulated

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) : FTC
  Special provision (ADR) : 274
  Limited quantities (ADR) : 1L
  Excepted quantities (ADR) : E2
  Packing instructions (ADR) : P001, IBC02
  Mixed packing provisions (ADR) : MP19
  Portable tank and bulk container instructions (ADR) : T11
  Portable tank and bulk container special provisions (ADR) : TP2, TP27
  Tank code (ADR) : L4BH
  Tank special provisions (ADR) : TU15
  Vehicle for tank carriage : FL
  Transport category (ADR) : 2
  Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
  Special provisions for carriage - Operation (ADR) : S2, S22
  Hazard identification number (Kemler No.) : 368
  Orange plates : 368

  Tunnel restriction code (ADR) : D/E
  EAC code : •3WE
  APP code : A(fl)

- Transport by sea
  Special provision (IMDG) : 274
### 1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS

Safety Data Sheet

<table>
<thead>
<tr>
<th>Limited quantities (IMDG)</th>
<th>: 1 L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excepted quantities (IMDG)</td>
<td>: E2</td>
</tr>
<tr>
<td>Packing instructions (IMDG)</td>
<td>: P001</td>
</tr>
<tr>
<td>IBC packing instructions (IMDG)</td>
<td>: IBC99</td>
</tr>
<tr>
<td>Tank instructions (IMDG)</td>
<td>: T11</td>
</tr>
<tr>
<td>Tank special provisions (IMDG)</td>
<td>: TP2, TP13, TP27</td>
</tr>
<tr>
<td>EmS-No. (Fire)</td>
<td>: F-E</td>
</tr>
<tr>
<td>EmS-No. (Spillage)</td>
<td>: S-C</td>
</tr>
<tr>
<td>Stowage category (IMDG)</td>
<td>: B</td>
</tr>
<tr>
<td>Stowage and handling (IMDG)</td>
<td>: SW2</td>
</tr>
<tr>
<td>Segregation (IMDG)</td>
<td>: SG5, SG8</td>
</tr>
<tr>
<td>MFAG-No</td>
<td>: 131</td>
</tr>
</tbody>
</table>

**- Air transport**

| PCA Excepted quantities (IATA) | : E2 |
| PCA Limited quantities (IATA) | : Y340 |
| PCA limited quantity max net quantity (IATA) | : 0.5L |
| PCA packing instructions (IATA) | : 352 |
| PCA max net quantity (IATA) | : 1L |
| CAO packing instructions (IATA) | : 363 |
| CAO max net quantity (IATA) | : 5L |
| ERG code (IATA) | : 3CP |

**- Inland waterway transport**

Not regulated

**- Rail transport**

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS is not on the REACH Candidate List

1,1,1,3,3,3-HEXAMETHYL DISILAZANE FOR SYNTHESIS is not on the REACH Annex XIV List

**15.1.2. National regulations**

**Germany**

AwSV/VwVwS Annex reference | Water hazard class (WGK) 2, hazardous to water (Classification according to VwVwS, Annex 3; WGK No 7824)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV | Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)
## Denmark

**Class for fire hazard**: Class I-1  
**Store unit**: 1 liter  
**Classification remarks**: F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed  
**Recommendations Danish Regulation**: Young people below the age of 18 years are not allowed to use the product  

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Full text of R-, H- and EUH-phares:

<table>
<thead>
<tr>
<th>R-Phrase</th>
<th>H-Phrase</th>
<th>EUH-Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3</td>
<td>Acute toxicity (dermal), Category 3</td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 3 (Inhalation:gas)</td>
<td>Acute toxicity (inhalation:gas) Category 3</td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
<td></td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
<td>Hazardous to the aquatic environment — Chronic Hazard, Category 3</td>
<td></td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids, Category 2</td>
<td></td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
<td></td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour</td>
<td></td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
<td></td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin</td>
<td></td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
<td></td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</td>
<td></td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
<td></td>
</tr>
<tr>
<td>R11</td>
<td>Highly flammable</td>
<td></td>
</tr>
<tr>
<td>R20/21/22</td>
<td>Harmful by inhalation, in contact with skin and if swallowed</td>
<td></td>
</tr>
<tr>
<td>R34</td>
<td>Causes burns</td>
<td></td>
</tr>
<tr>
<td>R52/53</td>
<td>Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Corrosive</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Highly flammable</td>
<td></td>
</tr>
<tr>
<td>Xn</td>
<td>Harmful</td>
<td></td>
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</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.