SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: TRANSENSE COMPANY, INC.
ADDRESS: DANVERS INDUSTRIAL PARK
10 ELECTRONICS AVENUE DANVERS, MA 01923
TEL: (978) 777-7860 FAX: (978)-739-5640
WWW.TRANSENSE.COM
EMERGENCY NO. 1-800-424-9300 CHEMTREC

MATERIAL NAME: HMDS (Hexamethyldisilazane)
REVISED: May 2019
CHEMICAL FAMILY: Silazane
Product Number: 100-HMDS100
for PT: 100-HMDS

SECTION 2. HEALTH HAZARD INFORMATION

GHS Classifications

H225: Flammable liquid: Category 2
H302: Acute toxicity oral: Category 4
H314: Skin corrosion / skin irritation: Category 1C
H319: Serious eye damage / eye irritation: Category 2A

Pictograms or Hazard symbols

Signal Word: Danger
Highly flammable liquid and vapor.
Causes severe skin irritation.
Harmful if swallowed. Causes serious eye irritation.

Precautionary Statements
P210 Keep away from heat, flames, and hot surfaces. No smoking.
P233 Keep container tightly closed.
P241 Use explosive-proof equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge. P260 Do not breathe fume/gas/mist/vapors.
P264 Wash thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P280 Wear protective gloves, clothing, and eye and face protection.
P301 + P312 If swallowed, call a physician if you feel unwell.
P301 + P330 + P331 If swallowed, rinse mouth. Do not induce vomiting.
P303 + P361 + P353 If on skin (or hair) take off immediately all contaminated clothing.
Rinse skin with water.
P304 + P340 If inhaled, remove person to fresh air and keep comfortable for breathing. 
P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes. 
P310 Seek medical assistance if exposed. 
P330 Rinse mouth. 
P363 Wash contaminated clothing before reuse. 
P370 + P378 In case of fire use ..... to extinguish. 
P403 + P235 Store in a well-ventilated place. Keep cool. 
P405 Store locked up. 
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS#</th>
<th>Wt %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>999-97-3</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

EFFECTS OF OVEREXPOSURE
FIRST AID:

Eye Contact: May cause moderate irritation to naked eye; in case of contact flush eyes well for 15 minutes, lifting the lower and upper eyelids occasionally. 

Skin Contact: May cause severe irritation and/or burns characterized by redness, swelling, and scab formation. Flush skin with water for 15 minutes. Prolonged exposure can cause burns and may result in permanent skin damage.

Inhalation: Inhalation of vapors may irritate the respiratory tract. If inhaled, remove to fresh air. If not breathing give artificial respiration. Seek medical attention.

Ingestion: Ingestion causes irritation and burning of the gastrointestinal tract. Get medical attention immediately.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point and Method  Autoignition Temp.  Flammability Limits In Air | LOWER | UPPER |
12.7 °C CC              380 °C           | 0.8   | 16.3  |

Explosion: Above flash point, vapor-air mixtures are explosive. Vapors are heavier than air and can flow along surfaces to distant ignition sources and flash back. Sensitive to static discharge.

Extinguishing media: Carbon dioxide or dry chemical.

Special fire fighting procedures: Wear full protective clothing and NIOSH self-contained breathing apparatus. Thermal decomposition produces toxic fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILLS, LEAKS: Ventilate area of leak or spill. Clean up personnel should wear protective clothing and NIOSH approved respirator. Evacuate non-essential personnel. Dike and cover the contaminated areas with absorbent material such as vermiculite or sand. Transfer to a closed container and send to an approved waste disposal facility. Remove all ignition sources.
SECTION 7. HANDLING AND STORAGE

Storage & Handling Information Store below 80 degrees F. Store in a cool dry place. Do not store near incompatible products, ignition sources, or open flame. Store away from direct sunlight. Ground containers when transferring material.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Respiratory protection: If exposure limits are exceeded, wear NIOSH/MESA approved full or half face piece (with goggles) respiratory protective equipment. A respiratory protection program complying with requirements of 29 CFR 1910.134 is recommended.

Ventilation: Where adequate ventilation is not available, use NIOSH approved vapor respirator with organic filters. Local ventilation through fume hoods or laminar flow stations is also preferred. Keep fumes away from ignition sources, sparks, or open flame.

Protective gloves: Skin contact should be minimized through use of impervious nitrile gloves.

Other protective equipment: Steel tipped shoes/eye wash station/chemical safety chemical retardant clothing.

Eye protection: Safety goggles / face shield.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Pungent ammonia</td>
</tr>
<tr>
<td>pH</td>
<td>no information</td>
</tr>
<tr>
<td>Melting point</td>
<td>-80 °C</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>125 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>12.7 °C CC</td>
</tr>
<tr>
<td>Ignition point</td>
<td>380 °C</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>0.8-16.3</td>
</tr>
<tr>
<td>Vapor density (Air = 1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Volatiles, %</td>
<td>100</td>
</tr>
<tr>
<td>Vapor pressure at 20° C, mm Hg</td>
<td>20</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.77 g/cc</td>
</tr>
<tr>
<td>Solubility in / Miscibility</td>
<td>Water reactive</td>
</tr>
<tr>
<td>Evap. Rate (Butyl Acetate = 1)</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

SECTION 10. STABILITY AND REACTIVITY

Stability Stable X Conditions to avoid: Contact with water. Temperatures above the flash point in combination with sparks, open flames, or ignition sources.

Incompatible with:
Water, alcohol, strong oxidizing agents, strong acids, amines.

Hazardous decomposition products: Ammonia, oxides of nitrogen, silicon dioxide, carbon dioxide, carbon monoxide.

Hazardous polymerization: May occur Conditions to avoid: Excess heat, sunlight.

Will not occur X

SECTION 11. TOXICOLOGICAL INFORMATION
Oral, rat LD$_{50}$: est. 800-2,000 mg/kg
Skin, rabbit LD$_{50}$: est. 500-1,000 mg/kg
Inhalation, rat LC$_{50}$: est. 30-40 mg/L
Investigated as a tumorigen, mutagen, reproductive effector

This chemical is not known or reported to affect reproductive function or fetal development; it is not known or reported to be mutagenic; it is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

SECTION 12. ECOLOGICAL INFORMATION

No ecological information available.

Ecotoxicity: No data.

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose of in accordance with all federal state and local regulations. Send waste to an approved waste disposal facility.

SECTION 14. TRANSPORTATION INFORMATION

Proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Hexamethyldisilazane)
Hazard Class: 3,8
UN2924
Packing Group II

SECTION 15. REGULATORY

NFPA: 1-3-1
HMIS: 3-3-1

Risk Symbol: F, C
Risk Phrases:
R10: Flammable
R21: Harmful in contact with skin
R34: Causes burns
R36/37: Irritating to eyes and respiratory system

Safety Phrases:
S3/7: Keep container tightly closed in a cool place
S16: Keep away from sources of ignition—No smoking
S20/21: When using do not eat, drink, or smoke

SECTION 16. OTHER INFORMATION

TSCA listed