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SAFETY DATA SHEET

1,1,1,3,3,3-HEXAMETHYLDISILAZANE

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

1.1 Product identifier:	
CAS Number:	999-97-3
EC number:	213-668-5
1.2 SYNONYMS:	• 1,1,1,3,3,3-Trimethylsilane-2,4-diamine • Hexamethyldisilazanyl • 1,1,1,3,3,3-Trimethyl-1-silazane • N-Trimethylsilyl-N-methylsilanamine • HMDS • Bis(trimethylsilyl)amine • Trimethylsilyltrimethylamine

SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:	Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.
2.2 Label elements:	Labelling according to Regulation (EC) No 1272/2008 Flammable liquids, (Category 2) Acute toxicity, oral (Category 4) Acute toxicity, Inhalation (Category 4) Acute toxicity, Dermal (Category 3) Long-term (chronic) aquatic hazard, (Category 3)
Hazard Pictograms:	
Signal Word:	Danger

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Hazard statements:	**H225:** Highly flammable liquid and vapor. **H302 + H332:** Harmful if swallowed or if inhaled. **H311:** Toxic in contact with skin. **H412:** Harmful to aquatic life with long lasting effects.
Precautionary Statements:	**P210:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. **P273:** Avoid release to the environment. **P280:** Wear protective gloves/ protective clothing/ eye protection/ face protection. **P301 + P312:** IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. **P303 + P361 + P353:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. **P304 + P340 + P312:** IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. **P405:** Store locked up. **P501:** Dispose of contents/ container to an approved waste disposal plant.
2.3 Other hazards:	
Inhalation:	can cause respiratory irritation, coughing, shortness of breath, and may lead to more severe effects such as central nervous system depression or damage with prolonged exposure.
Ingestion:	can cause nausea, vomiting, abdominal pain, and may lead to

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	more severe gastrointestinal and systemic effects.
Skin Contact:	can cause irritation, redness, dryness, and may lead to more severe reactions like chemical burns or dermatitis with prolonged exposure.
Eye contact:	can cause severe irritation, redness, tearing, and may result in more serious damage, including corneal injury, with prolonged exposure.
Chronic Exposure:	may cause respiratory issues, skin sensitization, liver or kidney damage, and could potentially lead to long-term neurological effects.
Aggravation of pre-existing conditions:	Aggravation of pre-existing conditions such as respiratory disorders (e.g., asthma), skin conditions (e.g., eczema), or liver and kidney diseases may occur with prolonged or repeated exposure to Hexamethyldisilazane (HMDS).

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation:	Substances
CAS No:	Description: 999-97-3 1,1,1,3,3,3-HEXAMETHYLDISILAZANE
Identification number(s):	EC number: 213-668-5

SECTION 4: First aid measures

4.1 Description of first aid measures	
General information:	
After inhalation:	If breathed in, move person into fresh air. If not breathing, give

	artificial respiration. Consult a physician.
After skin contact:	Remove contaminated clothing immediately .Wash with plenty of water. Consult a physician.
After eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. consult a physician.
After swallowing:	Rinse mouth with water. Immediately after ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed:	The most important symptoms and effects include respiratory irritation, coughing, and shortness of breath (acute), as well as potential skin sensitization, liver or kidney damage, and neurological effects with chronic or prolonged exposure (delayed).
4.3 Indication of any immediate medical attention and special treatment needed:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media:	Carbon dioxide, dry powder.
5.2 Special hazards arising from the substance or mixture:	Carbon oxides, ammonia.
5.3 Advice for firefighters:	Wear fully protective suit, safety glasses and respiratory device. Cool tanks/drums with water spray/remove them into safety.
5.4 further information:	no data available

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Avoid dust accumulation. Seek medical attention.
6.2 Environmental precautions:	Do not enter this chemical into drains.
6.3 Methods and material for containment and cleaning up:	Take up spill into absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:	For use in are with adequate ventilation. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material Do not use in confined spaces. Electrostatic discharge protection. Minimize dust generation and accumulation. Avoid ingestion and inhalation.
7.2 Conditions for safe storage, including any incompatibilities:	Store in original containers. Keep containers securely sealed Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

	Protect containers against physical damage and check regularly for leaks. Store in a dry and dark area. Keep away from moisture.
Requirements to be met by storerooms and receptacles:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
7.3 Specific end uses:	no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	
Additional information about design of technical facilities:	A system of local and general exhaust is recommended.
8.2 Exposure controls	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment:	Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.
General protective and hygienic measures:	Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.
	Respiratory protection: Required.
Protection of hands:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws. Wash and dry hands.
	Eye protection: Required

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Protection of Body:	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties General Information	
Appearance: Form:	Liquid
Colour:	Colourless to pale yellow
Odour:	Ammonia like, strong, pungent
pH-value:	No data available
Melting point/Melting range:	-50°C
Boiling point/Boiling range:	100°C
Flammability (solid, gaseous):	Highly Flammable
Ignition temperature:	210°C
Decomposition temperature:	Not determined
Self-igniting:	None
Flash point:	27°C
Danger of explosion:	None
Explosion limits: Lower:	1.1%
Explosion limits: Upper:	7.0%
Vapour pressure:	7.9 hPa at 20°C
Density at 20 °C:	0.78 g/cm³
Relative density:	0.78
Vapour density:	5.7
Evaporation rate:	No data available
Solubility in / Miscibility with- ·water at 20 °C:	Not recommended (highly reactive with water)
Partition coefficient:(n-octanol/water)	No data available
Viscosity:	0.48 cP at 25°C

SECTION 10: Stability and reactivity

10.1 Reactivity	It is highly reactive with water and moisture undergoing hydrolysis to produce silanols and ammonia.

10.2 Chemical stability	This chemical is stable under storage conditions.
10.3 Possibility of hazardous reactions	Highly reactive to water to form hazardous byproducts and thereby releasing ammonia gas.
10.4 Conditions to avoid	Open flames, moisture and water
10.5 Incompatible materials	Strong oxidizing agents, strong acids, bases, water. Alcohols
10.6 Hazardous decomposition products	Ammonia, silicic acid and silanol compounds, carbon monoxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute Toxicity:	**LD50** (Oral, Rat): 851 mg/kg **LD50** (Dermal, Rabbit): 547 mg/kg **LC50** (Inhalation Rat): 10 mg/l (6 hr)
Skin corrosion/Irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory damage/irritation:	No data available
Ingestion:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	No data available
Reproductive toxicity:	No data available
Specific target organ toxicity - single exposure:	No data available
Specific target organ toxicity - repeated exposure:	No data available
Aspiration hazard:	No data available
Signs and Symptoms of Exposure:	Refer section 2.3
11.2 Additional toxicological information	
Biodegradability:	Not Biodegradable

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SECTION 12: Ecological information

12.1 Toxicity **Aquatic toxicity:**	LC50(fish): 88 mg/l (96hr) EC50(daphnia): 80 mg/l (48hr) ErC50(algae): 19 mg/l (72hr)
12.2 Persistence and degradability:	Not Biodegradable
12.3 Bioaccumulative potential:	Low bioaccumulative
12.4 Mobility in soil:	High mobility
12.5 Other adverse effects:	No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Uncleaned packaging **Recommendation:**	dispose of in accordance with local hazardous waste regulations
Recommended cleansing agents:	Acetone, isopropyl alcohol, toluene.

SECTION 14: Transport information

14.1 UN-Number · ADR, ADN, IMDG, IATA:	3286
14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:	1,1,1,3,3,3-HEXAMETHYLDISILAZANE
14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :	3
14.4 Packing group · ADR, IMDG, IATA:	2
14.5 Environmental hazards:	Yes, harmful to aquatic life
14.6 Special precautions for user:	Handle responsibly.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture **Directive 2012/18/EU**	Directive 2012/18/EU, under that this substance is not classified in listed substances

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Named dangerous substances:	This substance is not listed in the annex 1 to the directive.
15.2 Chemical safety assessment:	Chemical assessment has not been carried out.

SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and limitations of our knowledge, this document is only for reference. Users should make their independent judgment suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.