

Material Safety Data Sheet

1,1,1,3,3,3,-Hexamethyldisilazane

Section 1 – PRODUCT AND COMPANY IDENTIFICATION

1. Product Identifier	1,1,1,3,3,3Hexamethyldisilazane; Hexamethyldisilazane
2. Recommended Use & Uses advised against	Uses for Laboratory and R&D only
3. Information of Supplier	SAMCHUN PURE CHEMICAL CO.,LTD ADDRESS; (Mogok-dong) 117, Sandan-ro 16Beon-gil, Pyeongtaek-si, Gyeonggi-do, Korea Emergency Phone; 82-31-668-0700/3 Department; Safety & Environment dep. Web site; http://www.samchun.com

Section 2 – HAZARDS and DANGER IDENTIFICATION

1.GHS Classification· Identification	Flammable liquid	Category2
	Acute toxic(Oral)	Category4
	Acute toxic(Inhalation)	Category4
	Skin Corrosion/Skin Irritation	Category1
	Serious Eye Damage/Eye Irritation	Category1

2. Label and Mark including Precautionary Statement

◦Label elements



◦Signal word

Danger

◦Hazard · Danger statement

H225 Highly flammable liquid and vapour
H302 Harmful if swallowed
H332 Harmful if inhaled
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage

◦Precautionary statement

Precaution

P210 Keep away from heat/sparks/open flames/hot surfaces. . No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/protective clothing/eye protection/face protection
P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

Measures

P303+P361+P353 SKIN (or hair) all contaminated clothing IF ON Take off. Rinse skin with water / shower.
P370+P378 In case of fire: Use (Section 5. explosions, according to the fire-fighting extinguishing agent suitable method) for extinction

- Measures** P330 Rinse mouth.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P321 Specific treatment (see Section 4. on this label).
P363 Wash contaminated clothing before reuse.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up
Storage
Dispose P501 Dispose of contents/container under related law and regulations

3. Other Hazard-Risk which are not included in the classification criteria

NFPA index(0~4steps) : Health=3, Fire=3, Reaction=1

By the flow of a substance or mixture that also can cause static electricity

Section 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	Other Name	CAS No.	Content (%)
1,1,1,3,3,3-Hexamethyldisilazane	Hexamethyldisilazane	999-97-3	100

Section 4 – FIRST AID MEASURES

- 1. Eye Contact** Rinse with plenty of water for at least 15minutes and get medical attention immediately.
- 2. Skin Contact** Take off contaminated cloths and shoes immediately, wash with plenty of water and soap for at least 15minutes.
- 3. Inhalation** Move victim to fresh air. If breathing is difficult, give artificial respiration and get medical attention immediately.
- 4. Ingestion** In case of inhalation, consider oxygen supply.
Avoid gastric lavage or vomiting during ingestion.
Get medical advice/attention immediately.
- 5. Immediate medical attention and Notes for physician** Keep the medical personnel aware of the materials involved and take protective action.

Section 5 – FIRE-FIGHT MEASURES

- 1. Suitable extinguish media** Powder extinguisher, foam extinguisher, carbon dioxide, water spray
Unsuitable Extinguishing Media: N/A
- 2. Special hazards arising from the substance** Decomposition products upon contact with water or air: ammonia, formaldehyde
Pyrolysis products or combustion products: Carbon oxides, nitrogen oxides, silicon oxides, formaldehyde, ammonia
- 3. Special protective equipment and Precautions for fire-fighters** Move containers from fire area if you can do it without risk. When extinguishing a fire, be sure to wear personal protective equipment.
If it is not possible to extinguish the fire, withdraw immediately. Keep containers cool by spraying with water for a long time, even after the fire is out. Isolate hazardous areas and deny access to people.

Section 6 – ACCIDENTAL RELEASE MEASURES

- 1. Personal precautions and Emergency procedures** Do not touch spilled material. Avoid inhalation and skin contact. In case of confined space, wear air respirator and ventilate and remove all sources of ignition.
- 2. Environmental precautions** Minimize leak/spill, collect and keep leak/spill in container
- 3. Methods and material for** Soak up with sand, clay and other inert absorbent material

containment and cleaning up

Section 7 – HANDLING AND STORAGE

- 1. Precautions for safe Handling** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. All containers should be grounded.
- 2. Conditions for safe storage** Keep container tightly closed in a dry, cool and well-ventilated place. Keep away from incompatible materials. Store in an inert atmosphere.

Section 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

1. Occupational exposure limit, biological exposure limit

National law of Safety management of

Occupational Health and Safety Act

- 2. Appropriate Engineering controls** Ensure compliance with applicable exposure limits and operate local exhaust ventilation when working.
If the substance is at risk of explosion, ventilation equipment should be explosion-resistant.
- 3. Personal protective equipment**
 - **Respiratory protection** Because it is concerned about the harmfulness of human body due to chemical substances, it is recommended to wear respiratory protective equipment with canister mask or gas filter in consideration of physical and chemical characteristics when handling.
Respiratory protection should be certified by the Health and Safety Authority.
It is concerned about the harmfulness of the human body depending on the working environment, it should wear respirator, air-purifying respirator
 - **Eye-protection** Wear safety glasses when handling as they may cause human health hazards due to chemicals. Install eye wash facilities and emergency eyewash stations near chemical handling sites
 - **Hand protection** Wear safety gloves when handling, as it is likely to harm human health due to chemicals
 - **Skin and body protection** Wear chemical protective clothing when handling, as it is likely to harm human health due to chemicals

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

1. Physical state and color	Liquid(Colorless to Yellow)	2. Odor	Ammonia odor
3. threshold	N/A	4. pH	8.5
5. Melting/Freezing point	-78°C	6. Boiling point/range	121~127°C
7. Flashing point	20°C	8. Evaporation speed	N/A
9. Flammability(solid,gas)	N/A	10. Flash or Explosion limit upper / lower	25.9% / 0.8%
11. Vapor pressure	19mmHg@20°C	12. Solubility	React
13. Vapor density	>4.7	14. Gravity	0.76
15. n-octanol-water Partition coefficient	N/A	16. Self ignition temp(°C)	325°C
17. Cracking temp(°C)	N/A	18. Viscosity	N/A
19. Molecular Weight	161.4		

Section 10 – STABILITY AND REACTIVITY

- 1. Chemical stability and Possibility of Hazardous Reactions** Highly flammable liquid and vapor. Violent reactions can cause fire and explosion.
May form explosive mixture at or above flash point
That the containers can explode when heated
Leaks are a fire / explosion hazard.
Not polymerized
- 2. Conditions to Avoid** Avoid heat, sparks, flames, static electricity and other sources of ignition.

	May decompose on contact with water or moisture. Toxic gases are generated.
3. Incompatible Materials	Acids, oxidants, bases, alcohols
4. Hazardous Decomposition Products	Decomposition products upon contact with water or air: ammonia, formaldehyde Pyrolysis products or combustion products: Carbon oxides, nitrogen oxides, silicon oxides, formaldehyde, ammonia

Section 11 – TOXICOLOGICAL INFORMATION

1. Information on the likely routes of exposure.

N/A

2. Health hazard information

◦Acute toxic	Oral : LD50 847mg/kg Rat Skin : LD50 540mg/kg Rabbit Inhalation : LC50 8.7mg/l 4hr Rat
◦Serious skin corrosive / irritation	Causes severe skin burns (skin burns, skin disorders).
◦Serious eye damage / irritation	Causes severe eye burns (eye burns, mucous membrane burns).
◦Respiratory sensitization	Respiratory tract burn
◦Skin sensitization	N/A
◦Carcinogenicity	N/A
◦Germ cell Mutagenicity	N/A
◦Reproductive toxic	N/A
◦Specific target organ toxicity (single exposure)	N/A
◦Specific target organ toxicity (repeated exposure)	N/A
◦Aspiration hazard	N/A

Section 12 – ECOLOGICAL INFORMATION

1.Acquatic and Terrestrial eco toxicity	Fish toxicity : LC50 167mg/l 96hr Pimephales promelas Invertebrate toxicity : LC50 186mg/l 48hr Daphnia magna Sea algae : N/A
2.Persistence and degradability	Persistence : N/A Degradability : N/A
3.Bioaccumulative potential	Concentrations : N/A Bioaccumulative : N/A
4.Mobility in soil	N/A
5.Other adverse effects	N/A

Section 13 – Disposable considerations

1.Waste methods	Dispose in accordance with local regulations.
2.Waste warning	Dispose prohibited substances and waste separately from others.

Section 14 – TRANSPORT INFORMATION

1. UN No.	1993
2.Proper shipping Name	FLAMMABLE LIQUID, N.O.S.
3.Hazard class	3
4.Packing group	I
5.Marine pollutant	N/A
6.Particular safety Measures for transportation	Fire emergency : F-E Emergency measures RELEASE : S-E

Section 15 – REGULATORY INFORMATION

1. Occupation safety and health acts	Non-described
2. Chemical Substances Control Act	Non-described
3. National law of Safety management of hazardous material	4 Class 1 Petroleum Water-insoluble liquid 200L
4. National law of management of Wastes	Designated Waste
5. Other domestic and foreign law	Non-described

Section 16 – OTHER INFORMATION

1. Material source	A chemical information MSDS Safety and Health Agency National Institute of Environmental Research Chemical Information Systems Korea Industrial Technology National Fire Hazardous Materials Information System
1. The 1 st edition	2002.07.30
2. Revision and The final revision	8 / 2020.03.17

. Other references

* 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.