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SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

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SECTION 1. Identification of the substance

Product identifiers

Product name: Hexamethyldisilazane

CAS-No.: 999-97-3

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

Details of the supplier of the safety data sheet

Company: CHEMLYTE SOLUTIONS CO., LTD

Address: A1-3-830, XiXi Center, No. 588, Wenyi West Road, Hangzhou 310000, Zhejiang, China

Telephone: +86-(571)-85061365

Fax : +86-(571)-85060165

Emergency telephone number

Emergency Phone # : +1-703-527-3887

SECTION 2. Hazards identification

GHS classification

Flammable liquids 2

Acute toxicity-oral 4

Acute toxicity-dermal 3

Acute toxicity- inhalation 3

Skin corrosion/irritation 1B

Serious eye damage/eye irritation 1

Specific target organ toxicity, single exposure 1

Specific target organ toxicity, single exposure 3

Hazardous to the aquatic environment, acute hazard 3

Hazardous to the aquatic environment, long-term hazard 3

GHS Pictograms

Signal words: Danger

Hazard statements

H225:Highly flammable liquid and vapour

H302:Harmful if swallowed
H311:Toxic in contact with skin
H331:Toxic if inhaled
H314:Causes severe skin burns and eye damage
H318:Causes serious eye damage
H370:Causes damage to organs
H335:May cause respiratory irritation
H402:Harmful to aquatic life
H412:Harmful to aquatic life with long lasting effects

Precautionary Statement

Prevention

P210:Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233:Keep container tightly closed.
P240:Ground and bond container and receiving equipment.
P241:Use explosion-proof electrical/ventilating/lighting/equipment.
P242:Use non-sparking tools.
P243:Take action to prevent static discharges.
P260:Do not breathe dust/fume/gas/mist/vapours/spray.
P261:Avoid breathing dust/fume/gas/mist/vapours/spray.
P262:Do not get in eyes, on skin, or on clothing.
P264:Wash hands [and…] thoroughly after handing.
P264+P265:Wash hands [and…] thoroughly after handing.
Do not touch eyes.
P270:Do not eat, drink or smoke when using this product.
P271:Use only outdoors or with adequate ventilation.
P273:Avoid release to the environment.
P280:Wear protective gloves/protective clothing/eye protection/face protection/hearing protection

Precautionary Statement

Response

P301+P317:IF SWALLOWED: Get medical help.
P301+P330+P331:IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352:IF ON SKIN: Wash with plenty of water
P302+P361+P354:IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P303+P361+P353:IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water[or shower].
P304+P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338:IF IN EYES:Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P316:IF exposed or concerned: Get emergency medical help immediately.
P316:Get emergency medical help immediately.
P317:Get medical help.

P319:Get medical help if you feel unwell.

P321:Specific treatment (see the supplemental first aid instruction).

P330:Rinse mouth.

P361+P364:Take off immediately all contaminated clothing and wash it before reuse.

P363:Wash contaminated clothing before reuse

P370+P378:In case of fire, use appropriate media to extinguish.

Precautionary Statement

Storage

P403+P233:Store in a well-ventilated place. Keep container tightly closed.

P403+P235:Store in a well-ventilated place. Keep cool.

P405:Store locked up.

Precautionary Statement

Disposal

P501:Dispose of contents/container in according with local regulation.

Other hazards which do not result in classification

Not available.

SECTION 3. Composition/information on ingredients

√Substances

□Mixtures

Component Information

Component	CAS number	EINECS number	Mass(%wt)
Hexamethyldisilazane	999-97-3	213-668-5	≥99.0
Hexamethyldisilazane	107-46-0	203-492-7	≤1.0

Note:1. Unless a component presents a severe hazard, it does not need to be considered in the SDS if the concentration is less than 1%.

SECTION 4. First-aid measures

NOTE TO PHYSICIAN

In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation.

After inhalation

Move to fresh air. Oxygen or artificial respiration if needed. Get immediate medical attention.

After skin contact

Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. If irritation persists, get medical attention immediately. For minor skin contact,

After eye contact

Avoid spreading material on unaffected skin.Wash clothing separately before reuse.

After ingestion

Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Loosen tight clothing such as a collar, tie, belt or waistband. Do not use mouth-to-mouth method if victim ingested the substance. Seek immediate medical attention.

Most important symptoms/effects, acute and delayed

Harmful if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. Causes damage to organs. May cause respiratory irritation.

SECTION 5. Fire-fighting measures

Suitable extinguishing agents

Alcohol-resistant foam, CO2, dry powder, sand.

Special hazards caused by the material, its products of combustion or flue gases Protective equipment for fire-fighters

Can be released in case of fire:

Carbon oxides, nitrogen oxides, silicon oxide. React with water to produce ammonia gas.Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

SECTION 6. Accidental release measures

Person-related safety precautions

Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away.

Measures for environmental protection

Prevent further leakage or spillage if safe to do so. Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting

Pick up and arrange disposal in suitable container. Clean contaminated surface thoroughly.

Additional information

See Section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7. Handling and storage

Handling

Information for safe handling

Avoid contact with skin, eyes, mucous membranes and clothing.

Under nitrogen gas operation, avoiding damp.

In case of insufficient ventilation, wear suitable respiratory equipment If ingested.

Information about protection against explosions and fires

Keep away from heat, sources of ignition, sparks or open flame.

STORAGE

Requirements to be met by storerooms and containers

Stored in nitrogen.

Keep in a cool, dry, well-ventilated place.

Keep tightly closed until used.

Information about storage in one common storage facility

Store away from incompatible substances such as water, strong oxidant, acid.

Further information about storage conditions

No data.

SECTION 8. Exposure controls/personal protection

Limit Values for Exposure

Component	CAS number	ACGIH TLV-TWA	ACGIH TLV-STEL	NIOSH REL-TWA	NIOSH REL-STEL
Hexamethyldisiloxane	999-97-3	N.E	N.E	N.E	N.E
Hexamethyldisiloxane	107-46-0	N.E	N.E	N.E	N.E

Appropriate engineering controls

Use adequate ventilation to keep airborne concentrations low.

Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower facility.

General protective and hygienic measures

Do not get this material in contact with skin. Do not get this material on clothing. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice.Wash hands before breaks and at the end of workday.

Personal protective equipment

Splash goggles, gloves, apron and a dust/vapor respirator.

Breathing equipment

When workers are facing high concentrations they must use appropriate certified respirators.

Protection of hands

Wear appropriate chemical resistant gloves.

Eye/Face protection

Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure.

Body protection

Use clean protective body-covering as needed to minimize contact with clothing and skin. Note: 1. N.E. not established.

SECTION 9. Physical and chemical properties

Physical state: Transparent liquid

Colour: Colorless

Odour: No data available

Melting point/freezing point: -80°C

Boiling point or initial

boiling point and boiling range: 125°C

Flammability: Highly flammable

Lower and upper explosion

limit/ flammability limit: Upper: 16.3 %(V/V); Lower: 0.8 %(V/V)

Flash point: 11.4 °C–Closed cup

Auto-ignition temperature: 380 °C

Decomposition temperature: Not applicable

pH: > 7.0

Kinematic viscosity: No data available

Solubility: No data available
Partition coefficient: 2.62
n-octanol/water(log value)
Vapour pressure: 20.0 hPa (20.0 ℃)
Density and/or relative density: 0.774 g/mL (25 ℃)
Relative vapour density (air=1): No data available
Particle characteristics: Not applicable

SECTION 10. Stability and reactivity

Reactivity: React violently with oxidant. Decompose if contact with water.
Chemical stability: Hydrolyses readily. Stable under recommended storage conditions.
Possibility of hazardous reactions: Reacts with water. Reaction causes the formation of: ammonia.
Conditions to avoid (e.g. static discharge, shock or vibration): Moisture. Heat and flame and spark. The extreme temperatures and direct sunlight.
Incompatible materials: Avoid contact with water, strong oxidant, acid.
Hazardous decomposition products: Carbon oxides, nitrogen oxides, silicon oxide; Reacts with water. Reaction causes the formation of: ammonia.

SECTION 11. Toxicological information

Routes of Entry: skin contact, eye contact, inhalation, ingestion.
Acute Toxicity
Hexamethyldisilazane
(CAS 999-97-3)
LD50 (Oral, rat):851 mg/kg
LC50 (Inhalation, rat): 8.7 mg/L (4h)
LD50 (Dermal, rabbit):547mg/kg - 589 mg/kg
Hexamethyldisiloxane (CAS 107-46-0)
LD50 (Oral, rat): >5000 mg/kg
LC50 (Inhalation, rat): 15956 ppm (4 h)
LD50 (Dermal, rabbit): >2000 mg/kg
Skin corrosion/Irritation: Causes severe skin burns
Serious eye damage/irritation: Causes serious eye damage
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Causes damage to organs
May cause respiratory irritation
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified
Chronic Effects: Not classified
Further Information: Not classified

SECTION 12. Ecological information

Ecotoxicity

Aquatic Toxicity: Hexamethyldisilazane (CAS 999-97-3)

Test & Species

96 Hr LC50 Fish: 88 mg/L

48 Hr EC50 Daphnia: 80 mg/L

72 Hr EC50 Algae: 19.00 mg/L

Hexamethyldisiloxane (CAS 107-46-0)

Test & Species

96 Hr LC50 Fish: approximately 0.46 mg/l

(Oncorhynchus mykiss)

48 Hr EC50 Daphnia: N/A

95 Hr EC50 Algae: 0.22 mg/l (Pseudokirchneriella subcapitata)

Persistence and degradability: Not easily biodegradable.

Bioaccumulative potential: Not available

Mobility in soil: Not available

Additional Information: Harmful to aquatic life with long lasting effects.

SECTION 13. Disposal considerations

WASTE DISPOSAL INSTRUCTIONS

Contact a qualified professional waste disposal service to dispose of this material. Dispose of in accordance with local environmental regulations or local authority requirements.

SECTION 14. Transport information

The Recommendation of Transport of Dangerous Goods(TDG)

UN Number: UN 3286

Proper Shipping Name: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (Hexamethyldisilazane and Hexamethyldisiloxane)

Class/Division: Class 3 Flammable Liquids

Package Group: PG II

Subsidiary risk: Division 6.1 Toxic Substances

Class 8 Corrosive Substances

labelling pictogram:

Maritime transport: IMDG Being same with TDG

Marine pollutant (Yes/No): No

Air transport ICAO-TI and IATA-DGR: Being same with TDG

Note: According to the EU REACH registration information provided by the enterprise, the sample is classified as UN 1992 under the EU REACH system, and the Proper Shipping Name: FLAMMABLE LIOUID, TOXIC, N.O.S. (Hexamethyldisilazane and Hexamethyldisiloxane).

SECTION 15. Regulatory information

European/International Regulations

OSHA: Hazardous by definition of Hazard Communication Standard(29CFR 1910.1200).

EINECS Status: The main components of this product are included in EINECS inventory.
EPA TSCA Status: The main components of this product are included in TSCA inventory.
Canadian DSL(Domestic Substances List): The main components of this product are included in DSL.
HMIS(Hazardous Material Identification System Ratings):
Health: 3
Flammability: 3
Physical hazard: 1
Personal protection: J(4. Severe Hazard; 3. Serious Hazard; 2. Moderate Hazard; 1. Slight Hazard; 0. Minimal Hazard)
WHMIS(Canadian Workplace Hazardous Material Identification System Ratings): B2、E、D1B(Hexamethyldisilazane); B2(Hexamethyldisiloxane)
GB 12268-2012 List of dangerous goods: This chemical is a dangerous goods on the GB 12268-2012 list of dangerous goods.

SECTION 16. Other information

Further information