1 Identification

Product identifier
Product name: Hexamethyldisilazane
Stock number: A15139, L00326
CAS Number: 999-97-3
EC number: 213-668-5

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department
Emergency telephone number:
During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

- **Flame**
  - GHS02 Flame

- **Highly flammable liquid and vapour.**
  - H225

- **Skull and crossbones**
  - GHS06 Skull and crossbones

- **Toxic in contact with skin.**
  - H311

- **Toxic if inhaled.**
  - H331

- **Corrosion**
  - GHS05 Corrosion

- **Causes severe skin burns and eye damage.**
  - H314

- **Causes serious eye damage.**
  - H318

- **Harmful if swallowed.**
  - H302

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

- **Corrosive**
  - C: Corrosive

- **Causes burns.**
  - R34

- **Harmful**
  - Xn: Harmful

- **Harmful by inhalation, in contact with skin and if swallowed.**
  - R20/21/22

- **Highly flammable**
  - F: Highly flammable

Information concerning particular hazards for human and environment: Not applicable

Hazard not otherwise classified: No information known.

(Contd. on page 2)
Safety Data Sheet
According to OSHA and ANSI

Product name: Hexamethyldisilazane

Label elements:
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labeled according to the CLP regulation.

Hazard pictograms

GHS02  GHS05  GHS06

Signal word Danger

Hazard statements
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.

Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P361 Remove/Take off immediately all contaminated clothing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
B2 - Flammable liquid
D2B - Toxic material causing other toxic effects
E - Corrosive material

Classification system

WHMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Substances
CAS® Description:
999-97-3 Hexamethyldisilazane
Identification number(s):
EC number: 213-668-5

4 First-aid measures

Description of first aid measures
General information Immediately remove any clothing soiled by the product.

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 3)
Safety Data Sheet
According to OSHA and ANSI

Product name: Hexamethyldisilazane

Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures
Extinguishing media
Suitable extinguishing agents CO2, sand, extinguishing powder. Do not use water.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Silicon oxide
Possibly Hydrogen cyanide (HCN)
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures
Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.
Methods and material for containment and cleaning up:
Keep away from ignition sources.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Prevention of secondary hazards: Keep away from ignition sources.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage
Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires:
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility:
Store away from oxidizing agents.
Store away from strong bases.
Store away from water/moisture.
Further information about storage conditions:
Store under dry inert gas.
This product is moisture sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and water.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection
Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters
Components with limit values that require monitoring at the workplace: Not required.
Additional information: No data

Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.
Eye protection:
Tightly sealed goggles
Full face protection

Body protection: Protective work clothing.

9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
</tr>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Liquid</td>
</tr>
<tr>
<td>Color: Not determined</td>
</tr>
<tr>
<td>Odor: Not determined</td>
</tr>
<tr>
<td>Odor threshold: Not determined.</td>
</tr>
<tr>
<td>pH-value: Not determined.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/Melting range: -78 ºC (-108 ºF)</td>
</tr>
<tr>
<td>Boiling point/Boiling range: 126 ºC (259 ºF)</td>
</tr>
<tr>
<td>Sublimation temperature / start: Not determined</td>
</tr>
</tbody>
</table>

| Flash point: 8 ºC (46 ºF)                             |
| Flammability (solid, gaseous) Not applicable.         |
| Ignition temperature: Not determined                  |
| Decomposition temperature: Not determined.            |
| Auto igniting: Not determined.                        |
| Explosion limits:                                    |
| Lower: Not determined                                 |
| Upper: Not determined                                 |
| Vapor pressure: Not determined.                       |
| Density at 20 ºC (68 ºF): 0.774 g/cm³ (6.459 lbs/gal) |
| Relative density: Not determined.                     |
| Vapor density: Not determined.                        |
| Evaporation rate: Not determined.                     |

(Contd. on page 5)
10 Stability and reactivity

Reactivity: No information known.
Chemical stability: Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Incompatible materials:
Oxidizing agents
Bases
Water/moisture
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Nitrogen oxides
Silicon oxide
Possibly Hydrogen cyanide (HCN)

11 Toxicological information

Information on toxicological effects:
Acute toxicity:
Harmful if inhaled.
Harmful in contact with skin.
Harmful if swallowed.
Danger through skin absorption.
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>Oral</th>
<th>Dermal</th>
<th>Inhalative</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</td>
<td>LD50</td>
<td>LC50/4H</td>
</tr>
<tr>
<td>850 mg/kg (rat)</td>
<td>550 mg/kg (rabbit)</td>
<td>8.7 mg/1/4H (rat)</td>
</tr>
</tbody>
</table>

Skin irritation or corrosion: Causes severe skin burns.
Eye irritation or corrosion: Causes serious eye damage.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Safety Data Sheet
According to OSHA and ANSI

Printing date 06/25/2013
Reviewed on 08/16/2011

Product name: Hexamethyldisilazane

Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

13 Disposal considerations
Waste treatment methods
Recommendation Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number
DOT, ADR, IMDG, IATA
UN2924

UN proper shipping name
DOT, IMDG, IATA
FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(Hexamethyldisilazane)
ADR
2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(Hexamethyldisilazane)

Transport hazard class(es)
DOT

Class
3 Flammable liquids.
Label
3+8
ADR

Class
3 (FC) Flammable liquids
Label
3+8
IMDG, IATA

Class
3 Flammable liquids.
Label
3+8

Packing group
DOT, ADR, IMDG, IATA
II

Environmental hazards:
Not applicable.

Special precautions for user
Warning: Flammable liquids
Danger code (Kemlar): 338

Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code
Not applicable.

(Contd. on page 7)
Safety Data Sheet
According to OSHA and ANSI

Product name: Hexamethyldisilazane

<table>
<thead>
<tr>
<th>Transport/Additional information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
</tr>
<tr>
<td>Marine Pollutant (DOT):</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
</tr>
</tbody>
</table>

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings) Substance is not listed.
Information about limitation of use: For use only by technically qualified individuals.
Other regulations, limitations and prohibitive regulations
Substances of very high concern (SVHC) according to REACH, Article 57
Substance is not listed.
REACH - Pre-registered substances Substance is listed.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
eINERIS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (Division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent