N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE

Safety Data Sheet SIA0592.0
Date of issue: 16/06/2015  Version: 1.0

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

1.1. Product identifier

Product form: Substance
Physical state: Liquid
Substance name: N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE
Product code: SIA0592.0
Formula: C8H20N2Si
Synonyms: N-AMINOETHYL-AZA-2,2-DIMETHYL-4-METHYLSILACYCLOPENTANE
Chemical family: ORGANOSILANE

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

1.2.1. Relevant identified uses

Use of the substance/mixture: Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2: H315
Serious eye damage/eye irritation, Category 1: H318
Specific target organ toxicity — Single exposure, Category 3: H335
Respiratory tract irritation

Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP):

GHS05
GHS07

Signal word (CLP): Danger
Hazard statements (CLP): H315 - Causes skin irritation.
H318 - Causes serious eye damage.
Precautionary statements (CLP)
- P261 - Avoid breathing vapours.
- P264 - Wash hands thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear eye protection, protective gloves, protective clothing.
- P302+P352 - IF ON SKIN: Wash with plenty of water.
- P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Substance type</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(2-aminoethyl)-2,2,4-trimethyl-1-aza-2-silacyclopentane</td>
<td>Mono-constituent</td>
<td>(CAS-No.) 18246-33-8</td>
<td>&gt; 95</td>
<td>Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of water/…. Get medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed


Symptoms/effects after skin contact: May cause skin irritation / dermatitis.

Symptoms/effects after eye contact: Causes serious eye damage.

Symptoms/effects after ingestion: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.
## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel
- **Emergency procedures**: Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders
- **Protective equipment**: Equip cleanup crew with proper protection.

### 6.2. Environmental precautions

- Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- **Methods for cleaning up**: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into an appropriate container for disposal.

### 6.4. Reference to other sections

- See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- **Precautions for safe handling**: Avoid all eye and skin contact and do not breathe vapour and mist. Provide good ventilation in process area to prevent formation of vapour. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use only non-sparking tools.

- **Hygiene measures**: Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- **Technical measures**: Containers must be properly grounded before beginning transfer.

- **Storage conditions**: Keep container tightly closed.

- **Incompatible materials**: Acids, alcohols, Oxidizing agent, Peroxides, Moisture, Water.

- **Storage area**: Keep container tightly closed.

### 7.3. Specific end use(s)

- No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

- No additional information available

### 8.2. Exposure controls

- **Appropriate engineering controls**: Provide local exhaust or general room ventilation.

- **Personal protective equipment**: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

- **Hand protection**: Neoprene or nitrile rubber gloves

- **Eye protection**: Chemical goggles. Contact lenses should not be worn

- **Skin and body protection**: Wear suitable protective clothing

- **Respiratory protection**: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- **Physical state**: Liquid

- **Appearance**: Clear liquid.

- **Molecular mass**: 172.35 g/mol
N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE
Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Colour</td>
<td>Straw.</td>
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<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4769</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>54 - 56 °C @ 2mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 65 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 1 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>&gt; 1 (air=1)</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.905</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 30 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts. Insoluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
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</tr>
<tr>
<td>Log Kow</td>
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</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
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</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
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<td>Oxidising properties</td>
<td>No data available</td>
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<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>9.2. Other information</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable when stored in sealed containers.

10.3. Possibility of hazardous reactions
Reacts with water and moisture in air.

10.4. Conditions to avoid
Heat. Open flame. Sparks.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Organic amine vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye damage.

Respiratory or skin sensitisation: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

STOT-single exposure: May cause respiratory irritation.

STOT-repeated exposure: Not classified

Aspiration hazard: Not classified
N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE
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Symptoms/effects after skin contact: May cause skin irritation / dermatitis.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: May be harmful if swallowed.
Reason for classification: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: Not classified

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product/Packaging disposal recommendations: May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR): Not applicable
UN-No. (IMDG): Not applicable
UN-No. (IATA): Not applicable
UN-No. (ADN): Not applicable
UN-No. (RID): Not applicable

14.2. UN proper shipping name
Proper Shipping Name (ADR): Not applicable
Proper Shipping Name (IMDG): Not applicable
Proper Shipping Name (IATA): Not applicable
Proper Shipping Name (ADN): Not applicable
Proper Shipping Name (RID): Not applicable

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR): Not applicable

IMDG
Transport hazard class(es) (IMDG): Not applicable

IATA
Transport hazard class(es) (IATA): Not applicable

ADN
Transport hazard class(es) (ADN): Not applicable
**N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE**

**Safety Data Sheet**

### RID

| Transport hazard class(es) (RID) | Not applicable |

<table>
<thead>
<tr>
<th><strong>14.4. Packing group</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (ADR)</td>
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</tr>
<tr>
<td>Packing group (IMDG)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (IATA)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (ADN)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (RID)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>14.5. Environmental hazards</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>Other information</td>
<td>No supplementary information available</td>
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<table>
<thead>
<tr>
<th><strong>14.6. Special precautions for user</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Overland transport</td>
<td>No data available</td>
</tr>
<tr>
<td>- Transport by sea</td>
<td>No data available</td>
</tr>
<tr>
<td>- Air transport</td>
<td>No data available</td>
</tr>
<tr>
<td>- Inland waterway transport</td>
<td>Not applicable</td>
</tr>
<tr>
<td>- Rail transport</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

| **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code** | Not applicable |

### SECTION 15: Regulatory information

<table>
<thead>
<tr>
<th><strong>15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>15.1.1. EU-Regulations</strong></td>
<td></td>
</tr>
<tr>
<td>No REACH Annex XVII restrictions</td>
<td></td>
</tr>
<tr>
<td><strong>N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE</strong> is not on the REACH Candidate List</td>
<td></td>
</tr>
<tr>
<td><strong>N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE</strong> is not on the REACH Annex XIV List</td>
<td></td>
</tr>
<tr>
<td><strong>N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE</strong> is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.</td>
<td></td>
</tr>
</tbody>
</table>

| % Volatiles | < 30 % |

<table>
<thead>
<tr>
<th><strong>15.1.2. National regulations</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Germany</strong></td>
<td></td>
</tr>
<tr>
<td>12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV</td>
<td>Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Netherlands</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SZW-liist van kankervenwekkende stoffen</td>
<td>The substance is not listed</td>
</tr>
<tr>
<td>SZW-liist van mutagene stoffen</td>
<td>The substance is not listed</td>
</tr>
<tr>
<td>NIET-limitatieve liist van voor de voortplanting giflige stoffen – Borstvoeding</td>
<td>The substance is not listed</td>
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<tr>
<td>NIET-limitatieve liist van voor de voortplanting giflige stoffen – Vruchtbaoardha</td>
<td>The substance is not listed</td>
</tr>
<tr>
<td>NIET-limitatieve liist van voor de voortplanting giflige stoffen – Ontwikkeling</td>
<td>The substance is not listed</td>
</tr>
</tbody>
</table>
N-(2-AMINOETHYL)-2,2,4-TRIMETHYL-1-AZA-2-SILACYCLOPENTANE
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Denmark
Classification remarks: Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3. Respiratory tract irritation |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |

SDS EU (REACH Annex II) - Custom
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