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,O-BIS(TRIMETHYLSILYL)ACETAMIDE |
| Product code | : SIB1846.0 |
| Formula | : C8H21NOSi2 |
| Synonyms | : BSA; TRIMETHYLSILYL N-TRIMETHYLSILYLACETAMIDATE; N,O-BIS(TRIMETHYLSILYL)ACETAMIDE |
| Chemical family | : ORGANOAMINOSILANE |

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

Use of the substance/mixture: Chemical intermediate

For research and industrial use only

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

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 (GHS-US)

Flam. Liq. 3
Skin Corr. 1B
Eye Dam. 1

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US): 

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H226 - Flammable liquid and vapor
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage

Precautionary statements (GHS-US) : P210 - Keep away from heat, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P260 - Do not breathe vapors
P264 - Wash hands thoroughly after handling
P280 - Wear eye protection, protective gloves, protective clothing
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor
P363 - Wash contaminated clothing before reuse
2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS-US)
No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type: Mono-constituent
Name: N,O-BIS(TRIMETHYLSILYL)ACETAMIDE
CAS No: 10416-59-8
EC no: 233-892-7

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,O-Bis(trimethylsilyl)acetamide</td>
<td>(CAS No) 10416-59-8</td>
<td>&gt; 95</td>
<td>Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

3.2. Mixture

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 victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

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

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

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

Symptoms/injuries: Causes severe skin burns and eye damage.


Symptoms/injuries after skin contact: Causes (severe) skin burns.

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

Symptoms/injuries after ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

Explosion hazard: May form flammable/explosive vapor-air mixture.

5.3.Advice for firefighters

Firefighting instructions: Use water spray to cool exposed surfaces. 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 vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Remove ignition sources. Use special care to avoid static electric charges.
N,O-BIS(TRIMETHYLSILYL)ACETAMIDE
Safety Data Sheet

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 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
Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling : Containers must be properly grounded before beginning transfer. Provide good ventilation in process area to prevent accumulation of vapors. Take precautionary measures against static discharge. Use only non-sparking tools. Do not breathe vapors.
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 : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment. Comply with applicable regulations.
Storage conditions : Keep container tightly closed.
Storage area : Store in a well-ventilated place. Store away from heat.

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 or face shield. Contact lenses should not be worn.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : 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 : 203.43 g/mol
Color : Straw.
Odor : Mild.
Odor threshold : No data available
Refractive index : 1.418
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : -24 °C
Freezing point : No data available
Boiling point : 71 - 73 °C @ 35 mm Hg
Flash point : 42 °C
**Auto-ignition temperature**: No data available

**Decomposition temperature**: No data available

**Flammability (solid, gas)**: Flammable liquid and vapor

**Vapor pressure**: 12 mm Hg @ 45°C

**Relative vapor density at 20 °C**: > 1

**Relative density**: 0.832

**VOC content**: < 3 %

**Solubility**: Insoluble in water. Reacts with water.

**Log Pow**: No data available

**Log Kow**: No data available

**Viscosity, kinematic**: No data available

**Viscosity, dynamic**: No data available

**Explosive properties**: No data available

**Oxidizing properties**: No data available

**Explosive limits**: No data available

9.2. **Other information**

No additional information available

**SECTION 10: Stability and reactivity**

10.1. **Reactivity**

No additional information available

10.2. **Chemical stability**

Stable in sealed containers stored under nitrogen.

10.3. **Possibility of hazardous reactions**

Reacts with water and moisture in air liberating, hexamethyldisiloxane (flammable) and trifluoroacetamide.

10.4. **Conditions to avoid**

Heat. Open flame. Sparks. Degrades at temperatures above 80°C.

10.5. **Incompatible materials**


10.6. **Hazardous decomposition products**


**SECTION 11: Toxicological information**

11.1. **Information on toxicological effects**

**Acute toxicity**: Not classified

**N,O-Bis(trimethylsilyl)acetamide (10416-59-8)**

| LD50 oral rat | 1580 mg/kg |

**Skin corrosion/irritation**: Causes severe skin burns and eye damage.

**Serious eye damage/irritation**: Causes serious eye damage.

**Respiratory or skin sensitization**: Not classified

**Germ cell mutagenicity**: Not classified

**Carcinogenicity**: A related hydrolysis product, acetamide, is an experimental carcinogen, neoplastigen and teratogen.

**Reproductive toxicity**: Not classified

**Specific target organ toxicity (single exposure)**: Not classified

**Specific target organ toxicity (repeated exposure)**: Not classified

**Aspiration hazard**: Not classified

**Symptoms/injuries after inhalation**: May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.

**Symptoms/injuries after skin contact**: Causes (severe) skin burns.

**Symptoms/injuries after eye contact**: Causes serious eye damage.

**Symptoms/injuries after ingestion**: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
N,O-BIS(TRIMETHYLSILYL)ACETAMIDE
Safety Data Sheet

## SECTION 12: Ecological information

<table>
<thead>
<tr>
<th>12.1. Toxicity</th>
<th>No additional information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.2. Persistence and degradability</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.3. Bioaccumulative potential</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.4. Mobility in soil</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.5. Other adverse effects</td>
<td></td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>This substance may be hazardous to the environment.</td>
</tr>
<tr>
<td>Effect on ozone layer</td>
<td>No additional information available</td>
</tr>
<tr>
<td>Effect on the global warming</td>
<td>No known ecological damage caused by this product.</td>
</tr>
</tbody>
</table>

## SECTION 13: Disposal considerations

<table>
<thead>
<tr>
<th>13.1. Waste treatment methods</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste disposal recommendations</td>
<td>May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.</td>
</tr>
<tr>
<td>Additional information</td>
<td>Handle empty containers with care because residual vapors are flammable.</td>
</tr>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

## SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1. UN number</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No.(DOT)</td>
<td>2920</td>
</tr>
<tr>
<td>DOT NA no.</td>
<td>UN2920</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td></td>
</tr>
<tr>
<td>Proper Shipping Name (DOT)</td>
<td>CORROSIVE LIQUIDS, FLAMMABLE, N.O.S. (N,O-BIS(TRIMETHYLSILYL)ACETAMIDE)</td>
</tr>
<tr>
<td>Department of Transportation (DOT) Hazard Classes</td>
<td>8 - Class 8 - Corrosive material 49 CFR 173,136</td>
</tr>
<tr>
<td>Hazard labels (DOT)</td>
<td>8 - Corrosive</td>
</tr>
<tr>
<td></td>
<td>3 - Flammable liquid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DOT Symbols</th>
<th>G - Identifies PSN requiring a technical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (DOT)</td>
<td>II - Medium Danger</td>
</tr>
<tr>
<td>DOT Packaging Exceptions (49 CFR 173.xxx)</td>
<td>None</td>
</tr>
<tr>
<td>DOT Packaging Non Bulk (49 CFR 173.xxx)</td>
<td>202</td>
</tr>
<tr>
<td>DOT Packaging Bulk (49 CFR 173.xxx)</td>
<td>243</td>
</tr>
</tbody>
</table>

| 14.3. Additional information                       | No supplementary information available.       |

**Transport by sea**

<table>
<thead>
<tr>
<th>DOT Vessel Stowage Location</th>
<th>C - The material must be stowed “on deck only” on a cargo vessel and on a passenger vessel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Vessel Stowage Other</td>
<td>25 - Shade from radiant heat,40 - Stow “clear of living quarters”</td>
</tr>
</tbody>
</table>

**Air transport**

<table>
<thead>
<tr>
<th>DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)</th>
<th>1 L</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)</td>
<td>30 L</td>
</tr>
</tbody>
</table>

## SECTION 15: Regulatory information

<table>
<thead>
<tr>
<th>15.1. US Federal regulations</th>
<th></th>
</tr>
</thead>
</table>
**N,O-Bis(trimethylsilyl)acetamide (10416-59-8)**

**Listed on the United States TSCA (Toxic Substances Control Act) inventory**

**15.2. International regulations**

<table>
<thead>
<tr>
<th>N,O-Bis(trimethylsilyl)acetamide (10416-59-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the AICS (Australian Inventory of Chemical Substances)</td>
</tr>
<tr>
<td>Listed on the Canadian NDSL (Non-Domestic Substances List)</td>
</tr>
<tr>
<td>Listed on IIECS (Inventory of Existing Chemical Substances Produced or Imported in China)</td>
</tr>
<tr>
<td>Listed on the EECC (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td>Listed on the Japanese ENCS (Existing &amp; New Chemical Substances) inventory</td>
</tr>
<tr>
<td>Listed on the Japanese ISHL (Industrial Safety and Health Law)</td>
</tr>
<tr>
<td>Listed on the Korean ECL (Existing Chemicals List)</td>
</tr>
<tr>
<td>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)</td>
</tr>
</tbody>
</table>

**15.3. US State regulations**

<table>
<thead>
<tr>
<th>N,O-BIS(TRIMETHYLSILYL)ACETAMIDE(10416-59-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</td>
</tr>
</tbody>
</table>

**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.

**Full text of H-phrases:**

- **Acute Tox. 4 (Oral)**: Acute toxicity (oral) Category 4
- **Eye Dam. 1**: Serious eye damage/eye irritation Category 1
- **Flam. Liq. 3**: Flammable liquids Category 3
- **Skin Corr. 1B**: Skin corrosion/irritation Category 1B
- **H226**: Flammable liquid and vapor
- **H302**: Harmful if swallowed
- **H314**: Causes severe skin burns and eye damage
- **H318**: Causes serious eye damage

**HMIS III Rating**

- **Health**: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- **Flammability**: 3 Serious Hazard
- **Physical**: 1 Slight Hazard

Prepared by safety and environmental affairs.

Date of issue: 12/31/2014  Version: 1.0
N,O-BIS(TRIMETHYLSILYL)ACETAMIDE
Safety Data Sheet

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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