

**N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE**

Safety Data Sheet SIB1876.0

Date of issue: 12/31/2014

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,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE  |
| Product code    | : SIB1876.0  |
| Formula         | : C <sub>8</sub> H <sub>18</sub> F <sub>3</sub> NOSi <sub>2</sub>  |
| Synonyms        | : BSTFA; TRIMETHYLSILYL 2,2,2-TRIFLUORO-N-(TRIMETHYLSILYL)ACETIMIDATE;<br>TRIMETHYLSILYL 2,2,2-TRIFLUORO-N-TRIMETHYLSILYLETHANEIMINE |
| Chemical family | : ORGANOAMINOSILANE  |

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

|                              |  |
|------------------------------|--|
| Use of the substance/mixture | : Chemical intermediate<br>For research 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](mailto:info@gelest.com) - [www.gelest.com](http://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 H226  
Skin Corr. 1C H314  
Eye Dam. 1 H318

Full text of H-phrases: see section 16

**2.2. Label elements****GHS-US labeling**

Hazard pictograms (GHS-US)



GHS02

GHS05

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)

: P280 - Wear protective clothing, protective gloves, eye protection  
P260 - Do not breathe vapors  
P264 - Wash hands thoroughly after handling  
P310 - Immediately call a doctor  
P210 - Keep away from heat, open flames, sparks. - No smoking  
P240 - Ground/bond container and receiving equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P241 - Use explosion-proof electrical equipment  
P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish  
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  
P363 - Wash contaminated clothing before reuse

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P233 - Keep container tightly closed  
P403+P235 - Keep in a cool place  
P405 - Store locked up  
P501 - Dispose of contents/container to licensed waste disposal facility.

### 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)TRIFLUOROACETAMIDE  
CAS No : 25561-30-2  
EC no : 247-103-9

| Name   | Product identifier  | %    | Classification (GHS-US)                                       |
|--|---------------------|------|---|
| Trimethylsilyl 2,2,2-trifluoro-N-(trimethylsilyl)acetimidate | (CAS No) 25561-30-2 | > 95 | Flam. Liq. 3, H226<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318 |

### 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. Get medical advice/attention.

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

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

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 : No information available.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

### 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.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

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### 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 : Wash contaminated clothing before reuse. Wash hands thoroughly after handling.

### 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.  
Storage conditions : Keep container tightly closed.  
Incompatible materials : Acids. Alcohols. Oxidizing agent. Peroxides. Moisture. Water.  
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 : 257.4 g/mol  
Color : Straw.  
Odor : Mild.  
Odor threshold : No data available  
Refractive index : 1.384  
pH : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : -10 °C  
Freezing point : No data available  
Boiling point : 45 - 50 °C @ 15 mm Hg  
Flash point : 24 °C  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : Flammable liquid and vapor  
Vapor pressure : 15 mm Hg @ 45°C

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|                                 |  |
|---------------------------------|--|
| Relative vapor density at 20 °C | : > 1                                    |
| Relative density                | : 0.969                                  |
| 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 when stored in sealed containers.

### 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

Acids. Alcohols. Oxidizing agent. Peroxides. Moisture. Water.

### 10.6. Hazardous decomposition products

Hexamethyldisiloxane. Organic acid vapors. Trifluoroacetamide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|  |   |
|--|---|
| Acute toxicity                                     | : Not classified  |
| 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                                    | : Not classified  |
|  | 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                  | : No information available.   |

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

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### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.  
Effect on ozone layer :  
Effect on the global warming : No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste 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.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number

UN-No.(DOT) : 2924  
DOT NA no. : UN2924

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : FLAMMABLE LIQUIDS, CORROSIVE, N.O.S.  
(N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE)  
Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Hazard labels (DOT) : 3 - Flammable liquid  
8 - Corrosive



DOT Symbols : G - Identifies PSN requiring a technical name  
Packing group (DOT) : III - Minor Danger  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 242

### 14.3. Additional information

Other information : No supplementary information available.

### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE (25561-30-2)

|                          |   |
|--------------------------|---|
| TSCA Exemption/Exclusion | CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States. |
|--------------------------|---|

#### Trimethylsilyl 2,2,2-trifluoro-N-(trimethylsilyl)acetimidate (25561-30-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

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### Trimethylsilyl 2,2,2-trifluoro-N-(trimethylsilyl)acetimidate (25561-30-2)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on NZIoC (New Zealand Inventory of Chemicals)

### 15.3. US State regulations

#### N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE(25561-30-2)

|   |    |
|---|----|
| U.S. - California - Proposition 65 - Carcinogens List               | No |
| U.S. - California - Proposition 65 - Developmental Toxicity         | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male   | No |

#### Trimethylsilyl 2,2,2-trifluoro-N-(trimethylsilyl)acetimidate (25561-30-2)

| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significance risk level (NSRL) |
|---|---|---|---|-----------------------------------|
| No  | No  | No  | No  |                                   |

## 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::

|               |  |
|---------------|--|
| Eye Dam. 1    | Serious eye damage/eye irritation Category 1 |
| Flam. Liq. 3  | Flammable liquids Category 3                 |
| Skin Corr. 1C | Skin corrosion/irritation Category 1C        |
| H226          | Flammable liquid and vapor                   |
| 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

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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