



# N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE

Safety Data Sheet SIB1876.0

Date of issue: 12/31/2014

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Version: 1.1

## SECTION 1: Identification

### 1.1. Identification

Product name	: N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE
Product code	: SIB1876.0
Product form	: Substance
Physical state	: Liquid
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-TRIMETHYLSIYLETHANEIMINE TRIMETHYLSILYL 2,2,2-TRIFLUORO-N-(TRIMETHYLSILYL)ACETIMIDATE
Chemical family	: ORGANOAMINOSILANE

### 1.2. Recommended use and restrictions on use

Recommended use	: Chemical intermediate
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### 1.3. Supplier

#### 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)
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## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Flammable liquids Category 3	H226	Flammable liquid and vapor
Skin corrosion/irritation Category 1C	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

#### 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)

: 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.  
P233 - Keep container tightly closed.  
P403+P235 - Keep in a cool place

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P405 - Store locked up.  
P501 - Dispose of contents/container to licensed waste disposal facility.

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE  
CAS-No. : 25561-30-2

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

Full text of hazard classes and 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 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 (acute and delayed)

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

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

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

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

Symptoms/effects after ingestion : No information available.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

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

### 5.2. Specific hazards arising from the chemical

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. Special protective equipment and precautions for fire-fighters

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.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

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### 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.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

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

### 8.3. Individual protection measures/Personal protective equipment

#### 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

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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
Relative vapor density at 20 °C	: > 1
Relative density	: 0.969
% Volatiles	: < 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
Explosion 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. None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.
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/effects after inhalation	: May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact	: Causes (severe) skin burns.
Symptoms/effects after eye contact	: Causes serious eye damage.

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Symptoms/effects 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

#### 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.

### SECTION 13: Disposal considerations

#### 13.1. Disposal 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.

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

Transport document description : UN2924 Flammable liquids, corrosive, n.o.s. (N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE), 3 (8), III

Proper Shipping Name (DOT) : Flammable liquids, corrosive, n.o.s. (N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE)

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 3 - Flammable liquid  
8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Symbols : G - Identifies PSN requiring a technical name

#### 14.3. Additional information

Emergency Response Guide (ERG) Number : 132

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

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

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

TSCA Exemption/Exclusion

Low Volume Exemption in accordance with 40 CFR 723.50(c)(1). Use of this substance is restricted to use in inorganic surface for surface modification - primarily for chromatographic application. Anyone who intends to use this chemical substance for commercial purposes must comply with specific use restrictions and controls specified herein. This LVE limits site of manufacture of this substance to Gelest, Inc. unless otherwise approved by U.S. EPA

##### 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

##### CANADA

No additional information available

##### EU-Regulations

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

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### National regulations

##### 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 Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on NZIoC (New Zealand Inventory of Chemicals)

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### SECTION 16: Other information

Full text of H-phrases::

H226	Flammable liquid and vapor
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

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.

#### Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

# N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE

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

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**NOTICE OF TSCA USE RESTRICTIONS AND REQUIRED CONTROLS FOR  
SIB1876.0  
N,O-BIS(TRIMETHYLSILYL)TRIFLUOROACETAMIDE**

Dear Customer:

The chemical product purchased, SIB1876.0 has been granted a Low Volume Exemption by the U.S. Environmental Protection Agency (EPA) under the Toxic Substances Control Act (TSCA) regulations (40 CFR 723.50). Any manufacturer or processor who intends to use this chemical substance for commercial purposes must comply with the specific use restrictions and controls specified as follows:

**USE OF THIS CHEMICAL SUBSTANCE IS RESTRICTED TO:** Inorganic surface for surface modification - primarily for chromatographic application

**CONTROLS:** Workers must use personal protection equipment to limit dermal and inhalation exposures as described in Section 8: Exposure Controls/Personal Protection of the Safety Data Sheet (SDS). These exposure controls include:

Hand protection: Impervious gloves (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: Air-purifying respirator with organic vapor-amine gas cartridge.

**WASTE DISPOSAL:** Customer must rinse containers with solvent prior to disposal. Residues and wash solvents must be containerized for off-site disposal by incineration at licensed waste disposal facility. Do not release to publicly owned treatment works (POTW) via sewer or to surface waters.

If you have questions or need more information related to allowable use of this substance, contact Gelest Regulatory Affairs at 215-547-1015.

Best Regards,

Gelest, Inc.  
Regulatory Affairs Department