SECTION 1: Identification

1.1. Identification

Product name: BIS(TRIMETHYLSILYL)-3-AMINOPROPYLTRIMETHOXYSILANE
Product code: SIB1852.9
Product form: Substance
Physical state: Liquid
Formula: C_{12}H_{33}NO_{3}Si_{3}
Synonyms: N,N-BIS(TRIMETHYLSILYL)-3-AMINOPROPYLTRIMETHOXYSILANE
Chemical family: ORGANOMETHOXYSILANE

1.2. Recommended use and restrictions on use

Recommended use: Chemical intermediate

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 - www.gelest.com

1.4. Emergency telephone number

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

SECTION 2: Hazard(s) Identification

2.1. Classification of the substance or mixture

GHS-US classification
- Flammable liquids Category 4: H227 - Combustible liquid
- Skin corrosion/irritation Category 2: H315 - Causes skin irritation
- Serious eye damage/eye irritation Category 2A: H319 - Causes serious eye irritation

2.2. GHS Label elements, including precautionary statements

GHS US labeling
- Hazard pictograms (GHS US):

   Signal word (GHS US): Warning
   Hazard statements (GHS US):
   - H227 - Combustible liquid
   - H315 - Causes skin irritation
   - H319 - Causes serious eye irritation
   Precautionary statements (GHS US):
   - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
   - P210 - Keep away from heat, open flames, sparks. - No smoking.
   - P264 - Wash hands thoroughly after handling.
   - P302+P352 - If on skin: Wash with plenty of soap and water
   - P332+P313 - If skin irritation persists: Get medical advice/attention.
   - P321 - Specific treatment (see first aid instructions on this label).
   - P362+P364 - Take off contaminated clothing and wash it before reuse.
   - P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish.
   - P403+P235 - Keep in a cool place
   - P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Hazards not otherwise classified (HNOC)

Other hazards not contributing to the classification:
- Additional methanol may be formed by reaction with moisture and water. The US OSHA PEL (TWA) for methanol is 200 ppm.
SECTION 3: Composition/Information on ingredients

### 3.1. Substances

<table>
<thead>
<tr>
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<th>%</th>
<th>GHS-US classification</th>
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<td>Bis(trimethylsilyl)-3-aminopropyltrimethoxysilane</td>
<td>(CAS-No.) 165181-43-1</td>
<td>95 - 100</td>
<td>Flam. Liq. 4, H227 Skin Irrit. 2A, H315 Eye Irrit. 2A, H319</td>
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</table>

Full text of hazard classes and H-statements: see section 16

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. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact: Wash with plenty of soap and 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 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 after inhalation | May cause irritation to the respiratory tract. |
| Symptoms/effects after skin contact | Causes skin irritation. |
| Symptoms/effects after eye contact | Causes serious eye irritation. |
| Symptoms/effects after ingestion | Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. |
| Chronic symptoms | On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. |

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

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 ml/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

SECTION 5: Fire-fighting measures

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

| Unsuitable extinguishing media | Do not use straight streams. |

#### 5.2. Specific hazards arising from the chemical

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

#### 5.3. Special protective equipment and precautions for fire-fighters

| Firefighting instructions | Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces. |
| 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

| Protective equipment | Wear protective equipment as described in Section 8. |
| Emergency procedures | Evacuate unnecessary personnel. |
**BIS(TRIMETHYLSILYL)-3-AMINOPROPYLTRIMETHOXYSILANE**

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6.1.2. For emergency responders

**Protective equipment:** Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal 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

**For containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for cleaning up:** Clean up any spills as soon as possible, using an absorbent material to collect it. Use only non-sparking tools.

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:** Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**Precautions for safe handling:** Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent accumulation of vapors. Use only non-sparking tools.

**Hygiene measures:** Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Keep container tightly closed. Keep in a cool place.


**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. 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:** Liquid.

**Molecular mass:** 323.65 g/mol

**Color:** No data available

**Odor:** No data available

**Odor threshold:** No data available
BIS(TRIMETHYLSILYL)-3-AMINOPROPYLTRIMETHOXYSILANE
Safety Data Sheet

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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.

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

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

10.5. Incompatible materials

10.6. Hazardous decomposition products
Methanol. Organic acid 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 irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

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
**Potential Adverse human health effects and symptoms:**

| Symptoms/effects after inhalation | May cause irritation to the respiratory tract. |
| Symptoms/effects after skin contact | Causes skin irritation. |
| Symptoms/effects after eye contact | Causes serious eye irritation. |
| Symptoms/effects after ingestion | Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. |
| Chronic symptoms | On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. |

**Reason for classification:** Expert judgment

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**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.

Effect on the ozone layer: No additional information available

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**SECTION 13: Disposal considerations**

**13.1. Disposal methods**

Sewage disposal recommendations: Do not dispose of waste into sewer.

Product/Packaging disposal recommendations: 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.

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**SECTION 14: Transport information**

**14.1. UN number**

DOT NA no.: NA1993

**14.2. UN proper shipping name**

Transport document description: NA1993 Combustible liquid, n.o.s. (BIS(TRIMETHYSILYL)-3-AMINOPROPYLTRIMETHOXYSILANE), 3, III

Proper Shipping Name (DOT): Combustible liquid, n.o.s. (BIS(TRIMETHYSILYL)-3-AMINOPROPYLTRIMETHOXYSILANE)

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

Packing group (DOT): III - Minor Danger

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

DOT Packaging Bulk (49 CFR 173.xxx): 241

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

DOT Symbols: D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name

**14.3. Additional information**

Other information: This product is Combustible as defined by the US Department of Transportation (DOT). It is regulated for transport in the US in container > 119 gallons (450 liters). The product is not regulated for transport by the IATA, ADR/RID, ADNR or the IMDG regulations.

**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.

**Air transport**

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 60 L
BIS(TRIMETHYLSILYL)-3-AMINOPROPYLTRIMETHOXYSIGILANE
Safety Data Sheet

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

| BIS(TRIMETHYLSILYL)-3-AMINOPROPYLTRIMETHOXYSIGILANE (165181-43-1) | 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. |
| Bis(trimethylsilyl)-3-aminopropyltrimethoxysilane (165181-43-1) | Not listed on the United States TSCA (Toxic Substances Control Act) inventory |

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

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:

| H227 | Combustible liquid |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |

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

2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)

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.

Date of issue: 01/10/2017 Revision date: 04/08/2019 Version: 1.1

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
BIS(TRIMETHYLSILYL)-3-AMINOPROPYLTRIMETHOXYSILANE
Safety Data Sheet

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