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,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95%
Product code : SIB1835.5
Formula : C13H32N2O7Si2
Synonyms : BIS[(3-TRIMETHOXYSILYL)PROPYLAMIDO]CARBONYL
Chemical family : ORGANOMETHOXYSILANE

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, Respiratory tract irritation : H335

Full text of H- and EUH-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) : 
Signal word (CLP) : Danger
Hazard statements (CLP) : H315 - Causes skin irritation.
H318 - Causes serious eye damage.
**N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95%**

**Safety Data Sheet**

**Precautionary statements (CLP):**
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P261 - Avoid breathing vapours.
- P264 - Avoid breathing vapours.
- P264 - Wash hands thoroughly after handling.
- 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 POISON CENTER or doctor.

## 2.3. Other hazards

Other hazards which do not result in 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

**Substance type:** Multi-constituent

**Name:** N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95%

**CAS-No.:** 18418-53-6

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Bis(3-trimethoxysilylpropyl)urea</td>
<td>(CAS-No.) 18418-53-6</td>
<td>90 – 100</td>
<td>Skin Irrit. 2, H315 &lt;br&gt; Eye Dam. 1, H318 &lt;br&gt; STOT SE 3, H335</td>
</tr>
<tr>
<td>[3-(Trimethoxysilyl)propyl]urea</td>
<td>(CAS-No.) 23843-64-3 (EC-No.) 245-904-8</td>
<td>0 – 10</td>
<td>Skin Irrit. 2, H315 &lt;br&gt; Eye Dam. 1, H318 &lt;br&gt; 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 if you feel unwell.

**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 inhalation:** May cause respiratory irritation.

**Symptoms/effects after skin contact:** Causes skin irritation.

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

**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. Onset of symptoms may be delayed up to 48 hours.

**Chronic symptoms:** On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.

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

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 mls/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: Firefighting measures

### 5.1. Extinguishing media

### N,N'-BIS(3-TRIMETHOXYSYLPROPYL)UREA, 95% Safety Data Sheet

**Unsuitable extinguishing media**: Do not use straight streams.

### 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. 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 vapour and mist.

### SECTION 6: Accidental release measures

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

**6.1.1. For non-emergency personnel**

**Protective equipment**: Wear protective equipment as described in Section 8.

**Emergency procedures**: Evacuate unnecessary personnel.

**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.

**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. Use only outdoors or in a well-ventilated area.

**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. Store locked up.


**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**:

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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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid. Viscous.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>384.58 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Straw to amber.</td>
</tr>
<tr>
<td>Odour</td>
<td>Amine. Ammonia-like.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4488</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
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</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>&gt; 200 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 110 °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>No data available</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</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.1</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 25 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
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</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>No data available</td>
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<tr>
<td>Viscosity, kinematic</td>
<td>100 – 250 cSt</td>
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<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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. Open flame. Sparks.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Organic acid vapors. Methanol.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity : Not classified
N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95%

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[3-(Trimethoxysilyl)propyl]urea (23843-64-3)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

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: None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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
Potential adverse human health effects and symptoms:
- This material liberates small amounts of methanol on contact with moisture. Material generates methanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating effect on overexposed tissue.
- May cause respiratory irritation.
- Causes skin irritation.
- Causes serious eye damage.
- Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. Onset of symptoms may be delayed up to 48 hours.

Chronic symptoms: On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.

Reason for classification: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity
- Hazardous to the aquatic environment, short-term (acute): Not classified
- Hazardous to the aquatic environment, long-term (chronic): 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
- 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.

SECTION 14: Transport information

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

14.1. UN number
UN-No. (ADR): Not applicable
## 14.2. UN proper shipping name

| UN-No. (IMDG) | : Not applicable |
| UN-No. (IATA) | : Not applicable |
| UN-No. (ADN) | : Not applicable |
| UN-No. (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 |

### RID

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

## 14.4. Packing group

| Packing group (ADR) | : Not applicable |
| Packing group (IMDG) | : Not applicable |
| Packing group (IATA) | : Not applicable |
| Packing group (ADN) | : Not applicable |
| Packing group (RID) | : Not applicable |

## 14.5. Environmental hazards

| Dangerous for the environment | : No |
| Marine pollutant | : No |
| Other information | : No supplementary information available |

## 14.6. Special precautions for user

- **Overland transport**
  No data available

- **Transport by sea**
  No data available

- **Air transport**
  No data available

- **Inland waterway transport**
  No data available

- **Rail transport**
  No data available

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions
N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95%

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N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95% is not on the REACH Candidate List
N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95% is not on the REACH Annex XIV List
N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95% 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.
N,N'-BIS(3-TRIMETHOXYSILYLPROPYL)UREA, 95% is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

% Volatiles : < 25 %

15.1.2. National regulations

Germany
Regulatory reference : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark
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; TC: 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. | Serious eye damage/eye irritation, Category 1 |
| Skin Irrit. | 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

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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