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-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95%
Product code: SIA0590.5
Formula: C11H28N2O3Si
Synonyms: 1,2-ETHANEDIAMINE, N-[3-(TRIETHOXYSILYL)PROPYL]-; N-[3-(TRIETHOXYSILYL)PROPYL]ETHYLENEDIAMINE
Chemical family: ORGANOETHOXYSILANE

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.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 according to Regulation (EC) No. 1272/2008 [CLP]
Skin corrosion/irritation, Category 2: H315
Serious eye damage/eye irritation, Category 2: H319
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): Warning
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95%
Safety Data Sheet

Hazard statements (CLP) : H315 - Causes skin irritation.
                           H319 - Causes serious eye irritation.
                           H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
                                 P302+P352 - IF ON SKIN: Wash with plenty of water.
                                 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.
                                 P312 - Call a doctor if you feel unwell.
                                 P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Other hazards
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII
Other hazards which do not result in classification : The hydrolysis product of this compound is ethanol. Overexposure to ethanol by skin absorption, inhalation or ingestion may have a narcotic effect (headache, nausea, drowsiness). Ethanol is metabolized to acetaldehyde and acetic acid which in large quantities result in metabolic acidosis, CNS depression and death due to respiratory arrest. This product contains ethanol which is classified as a carcinogen by IARC in alcoholic beverages.

SECTION 3: Composition/information on ingredients

3.1. Substances

<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-[3-(Triethoxysilyl)propyl]ethylenediamine</td>
<td>(CAS-No.) 5089-72-5</td>
<td>&gt; 95</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 225-806-1</td>
<td></td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>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.
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 skin contact : Causes skin irritation. May cause sensitisation by skin contact.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.

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 : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
### 5.3. Advice for firefighters

<table>
<thead>
<tr>
<th>Firefighting instructions</th>
<th>Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection during firefighting</td>
<td>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.</td>
</tr>
</tbody>
</table>

### SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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 Section 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. Provide good ventilation in process area to prevent formation of vapour.

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

7.2. Conditions for safe storage, including any incompatibilities

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. 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

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
</tbody>
</table>
## N-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95%

### Safety Data Sheet

**Molecular mass**: 264.55 g/mol  
**Colour**: Straw.  
**Odour threshold**: No data available  
**Refractive index**: 1.4367  
**pH**: No data available  
**Relative evaporation rate (butylacetate=1)**: < 1  
**Melting point**: No data available  
**Freezing point**: < 0 °C  
**Boiling point**: 156 °C @ 15 mm Hg  
**Flash point**: 148 °C  
**Auto-ignition temperature**: No data available  
**Decomposition temperature**: No data available  
**Flammability (solid, gas)**: No data available  
**Vapour pressure**: < 5 mm Hg @ 25°C  
**Relative vapour density at 20 °C**: No data available  
**Relative density**: 0.994  
**% Volatiles**: < 5 %  
**Solubility**: Reacts with water.  
**Partition coefficient n-octanol/water (Log Pow)**: No data available  
**Partition coefficient n-octanol/water (Log Kow)**: No data available  
**Viscosity, kinematic**: No data available  
**Viscosity, dynamic**: No data available  
**Explosive properties**: No data available  
**Oxidising properties**: No data available  
**Explosive limits**: No data 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 ethanol.

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

#### 10.5. Incompatible materials

#### 10.6. Hazardous decomposition products
Ethanol. Organic amine vapors.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>9280 mg/kg</td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**: Causes skin irritation.  
**Serious eye damage/irritation**: Causes serious eye irritation.  
**Respiratory or skin sensitisation**: Not classified  
**Germ cell mutagenicity**: Not classified  
**Carcinogenicity**: Not classified

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Print date: 17/05/2022  
SDS ID: SIA0590.5
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95%
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<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive toxicity</td>
<td>: Not classified</td>
<td></td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>: May cause respiratory irritation.</td>
<td></td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>: Not classified</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>: Not classified</td>
<td></td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>: Causes skin irritation. May cause sensitisation by skin contact.</td>
<td></td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>: Causes serious eye irritation.</td>
<td></td>
</tr>
<tr>
<td>Symptoms/effects after ingestion</td>
<td>: May be harmful if swallowed.</td>
<td></td>
</tr>
<tr>
<td>Reason for classification</td>
<td>: Expert judgment</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

<table>
<thead>
<tr>
<th>12.1. Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous to the aquatic environment, short-term (acute)</td>
</tr>
<tr>
<td>Hazardous to the aquatic environment, long-term (chronic)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12.2. Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12.3. Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12.4. Mobility in soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12.5. Results of PBT and vPvB assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12.6. Other adverse effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other adverse effects</td>
</tr>
</tbody>
</table>

### SECTION 13: Disposal considerations

<table>
<thead>
<tr>
<th>13.1. Waste treatment methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/Packaging disposal recommendations</td>
</tr>
</tbody>
</table>

| Ecology - waste materials | : Avoid release to the environment. |

### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1. UN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>In accordance with ADR / IMDG / IATA / ADN / RID</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.1. UN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (ADR)</td>
</tr>
<tr>
<td>UN-No. (IMDG)</td>
</tr>
<tr>
<td>UN-No. (IATA)</td>
</tr>
<tr>
<td>UN-No. (ADN)</td>
</tr>
<tr>
<td>UN-No. (RID)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.2. UN proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (ADR)</td>
</tr>
<tr>
<td>Proper Shipping Name (IMDG)</td>
</tr>
<tr>
<td>Proper Shipping Name (IATA)</td>
</tr>
<tr>
<td>Proper Shipping Name (ADN)</td>
</tr>
<tr>
<td>Proper Shipping Name (RID)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.3. Transport hazard class(es)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
</tr>
<tr>
<td>IMDG</td>
</tr>
</tbody>
</table>
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95%
Safety Data Sheet

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
  Not applicable
- Rail transport
  Not applicable

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
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95% is not on the REACH Candidate List
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95% is not on the REACH Annex XIV List

% Volatiles : < 5 %

15.1.2. National regulations

Germany
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIETHOXYSILANE, 95%
Safety Data Sheet

Regulatory reference : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)

Hazardous Incident Ordinance (12. BlmSchV) : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed
SZW-lijst van reprotoxische 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; 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

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation |

SDS EU (REACH Annex II) - Custom

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