N-(TRIMETHOXYSILYLPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT, 35% in water

Safety Data Sheet SIT8402.0
Issue date: 01/13/2015 Revision date: 11/17/2023  Version: 1.2

SECTION 1: Identification

1.1. Identification

Product name : N-(TRIMETHOXYSILYLPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT, 35% in water
Product code : SIT8402.0
Product form : Mixture
Physical state : Liquid
Formula : C14H25N2Na3O9Si
Synonyms : TRISODIUM SALT

Chemical family : SILICATE SOLUTION

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

Skin corrosion/irritation Category 2 : H315 Causes skin irritation
Serious eye damage/eye irritation Category 2A : H319 Causes serious eye irritation
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) : Warning
Hazard statements (GHS US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
Precautionary statements (GHS US) : P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove
N-(TRIMETHOXYSILYLPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT, 35% in water
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contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see supplemental first aid instruction on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

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
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>CAS-No.: 7732-18-5</td>
<td>50 – 60</td>
<td>Not classified</td>
</tr>
<tr>
<td>N-(Trimethoxysilylpropyl)ethylenediaminetriacetate, trisodium salt</td>
<td>CAS-No.: 128850-89-5/1138444-28-6</td>
<td>32 – 38</td>
<td>Not classified</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>CAS-No.: 7647-14-5</td>
<td>8 – 12</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</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. If you feel unwell, seek medical advice.

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 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. Overexposure may cause: Coughing. Headache. Nausea.

Symptoms/effects after skin contact : Causes skin irritation.

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

Symptoms/effects after ingestion : May be harmful if swallowed.

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  : Not combustible.
Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

Fire hazard  : None known.
Explosion hazard : None known.

5.3. Special protective equipment and precautions for fire-fighters

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

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

No additional information available

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 vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors.
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.
Incompatible materials  : None known.
## 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:** 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

<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>Clear solution.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>462.42 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</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>100 °C - initial (water)</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</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>Vapor pressure</td>
<td>&lt; 1 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Relative vapor density at 20°C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.26</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 9.2. Other information

No additional information available.
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SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products
Carbon dioxide. Silicon dioxide. Sodium hydroxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity (oral)</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Sodium chloride (7647-14-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>3 g/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 10000 mg/kg body weight</td>
</tr>
<tr>
<td>Animal: rabbit</td>
<td></td>
</tr>
<tr>
<td>LC50 Inhalation - Rat</td>
<td>&gt; 42 g/m³ (Exposure time: 1 h)</td>
</tr>
</tbody>
</table>

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

STOT-single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard: Not classified

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

Symptoms/effects after skin contact: Causes skin irritation.

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

Symptoms/effects after ingestion: May be harmful if swallowed.

Reason for classification: Expert judgment
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SECTION 12: Ecological information

12.1. Toxicity

**Sodium chloride (7647-14-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 - Fish [1]</td>
<td>5560 – 6080 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])</td>
</tr>
<tr>
<td>EC50 - Crustacea [1]</td>
<td>1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>LC50 - Fish [2]</td>
<td>12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
<tr>
<td>EC50 - Crustacea [2]</td>
<td>340.7 – 469.2 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
</tr>
<tr>
<td>LOEC (chronic)</td>
<td>441 mg/l Test organisms (species): Daphnia pulex Duration: ’21 d'</td>
</tr>
<tr>
<td>NOEC (chronic)</td>
<td>314 mg/l Test organisms (species): Daphnia pulex Duration: ’21 d'</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

**Water (7732-18-5)**

Partition coefficient n-octanol/water (Log Pow) -1.38

**Sodium chloride (7647-14-5)**

BCF - Fish [1] (no bioaccumulation)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the ozone layer: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations: Landfill. Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.1. UN number

Not regulated for transport

14.2. Proper Shipping Name

Not applicable

Transport document description

Not applicable
14.3. Transport hazard class(es) | Not applicable | Not applicable | Not applicable | Not applicable
---|---|---|---|---
14.4. Packing group | Not applicable | Not applicable | Not applicable | Not applicable
14.5. Environmental hazards | Dangerous for the environment: No | Dangerous for the environment: No | Dangerous for the environment: No | Dangerous for the environment: No
   | Marine pollutant: No | Marine pollutant: No | Marine pollutant: No | Marine pollutant: No
No supplementary information available

14.6. Special precautions for user
DOT | No data available
TDG | No data available
IMDG | No data available
IATA | No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

N-(TRIMETHOXYSYILPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT, 35% in water

TSCA Exemption/Exclusion | Low Volume Exemption in accordance with 40 CFR 723.50(c)(1). Use of this substance is restricted to use in modification of inorganic surfaces. 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
---|---

Commercial status of components according to the United States Environmental Protection Agency’s Toxic Substances Control Act (TSCA):

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No.</th>
<th>Listing</th>
<th>Commercial status</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Present</td>
<td>Active</td>
<td></td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>Present</td>
<td>Active</td>
<td></td>
</tr>
<tr>
<td>N-(Trimethoxysilylpropyl)ethylenediaminetriacetate, trisodium salt</td>
<td>128850-89-5/1138444-28-6</td>
<td>Not present</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
N-(TRIMETHOXYSILYLPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT, 35% in water
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15.2. International regulations

CANADA

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)

Sodium chloride (7647-14-5)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Sodium chloride (7647-14-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Water (7732-18-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Sodium chloride (7647-14-5)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IEGSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control 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:

<table>
<thead>
<tr>
<th>H315</th>
<th>Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

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: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 0 Minimal Hazard - Materials that will not burn
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Prepared by safety and environmental affairs.

Issue date: 01/13/2015  Revision date: 11/17/2023  Version: 1.2

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
NOTICE OF TSCA USE RESTRICTIONS AND REQUIRED CONTROLS FOR
SIT8402.0
N-(TRIMETHOXYSILYLPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT, 35% in water

Dear Customer:

The chemical product purchased, SIT8402.0 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**: Modification of inorganic surface

**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.

**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