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

Date of issue: 01/13/2015  
Revision date: 10/30/2018  
Version: 1.1

SECTION 1: Identification

1.1. Identification
Product name: N-(TRIMETHOXYSYLPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT, 35% in water
Product code: SIT8402.0
Product form: Mixture
Physical state: Liquid
Formula: C14H25N2Na3O9Si
Synonyms: TRIHYDROXYSILYLPROPYL EDTA, SODIUM SALT
N-(TRIMETHOXYSYLPROPYL)ETHYLENEDIAMINETRIACETATE, TRISODIUM SALT
GLYCINE, N-[2-(BIS(CARBOXYMETHYL)-AMINOETHYL]-N-[3-(TRIHYDROXYSYL)PROPYL, SODIUM 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): ![Exclamation Mark]
Signal word (GHS US): Warning
Hazard statements (GHS US): H315 - Causes skin irritation
H319 - Causes serious eye irritation
Precautionary statements (GHS US): P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.
P302+P352 - If on skin: Wash with plenty of water
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash 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
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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

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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

Physical state: Liquid
Appearance: Clear solution.
Molecular mass: 462.42 g/mol
Color: No data available
Odor: No data available
Odor threshold: No data available
Refractive index: No data available
pH: No data available
Relative evaporation rate (butyl acetate=1): No data available
Melting point: No data available
Freezing point: < 0 °C
Boiling point: 100 °C - initial (water)
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: < 1 mm Hg @ 20°C
Relative vapor density at 20 °C: No data available
Relative density: 1.26
Solubility: Soluble in water.
Log Pow: No data available
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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.

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
Acute toxicity: Not classified

Water (7732-18-5)
LD50 oral rat: > 90 ml/kg

Sodium chloride (7647-14-5)
LD50 oral rat: 3 g/kg
LC50 inhalation rat (mg/l): > 42 g/m³ (Exposure time: 1 h)
ATE US (oral): 3000 mg/kg body weight

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
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

SECTION 12: Ecological information

12.1. Toxicity
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**SECTION 12:** Toxicological information

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish</th>
<th>EC50 Daphnia</th>
<th>LC50 fish</th>
<th>EC50 Daphnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride (7647-14-5)</td>
<td>5560 - 6080 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])</td>
<td>1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
<td>12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
<td>340.7 - 469.2 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>BCF fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride (7647-14-5)</td>
<td>(no bioaccumulation)</td>
</tr>
</tbody>
</table>

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

14.1. UN number
Not regulated for transport.

14.2. UN proper shipping name
Not applicable

14.3. Additional information
Other information : No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

**SECTION 15:** Regulatory information

15.1. US Federal regulations

**N-(TRIMETHOXYSILYLPROPYL)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

**Water (7732-18-5)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Sodium chloride (7647-14-5)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**N-(Trimethoxysilylpropyl)ethylenediaminetriacetate, trisodium salt (128850-89-5/1138444-28-6)**
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

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

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<table>
<thead>
<tr>
<th>Water (7732-18-5)</th>
<th>Listed on the Canadian DSL (Domestic Substances List)</th>
<th>WHMIS Classification: Uncontrolled product according to WHMIS classification criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride (7647-14-5)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
<td>WHMIS Classification: Uncontrolled product according to WHMIS classification criteria</td>
</tr>
</tbody>
</table>

**EU-Regulations**

<table>
<thead>
<tr>
<th>Water (7732-18-5)</th>
<th>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride (7647-14-5)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
</tbody>
</table>

**National regulations**

<table>
<thead>
<tr>
<th>Water (7732-18-5)</th>
<th>Listed on the AICS (Australian Inventory of Chemical Substances)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride (7647-14-5)</td>
<td>Listed on the AICS (Australian Inventory of Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on the Korean ECL (Existing Chemicals List)</td>
</tr>
<tr>
<td></td>
<td>Listed on NZIoC (New Zealand Inventory of Chemicals)</td>
</tr>
<tr>
<td></td>
<td>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on INSQ (Mexican National Inventory of Chemical Substances)</td>
</tr>
</tbody>
</table>

**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

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**SECTION 16: Other information**

Full text of H-phrases:

- **H315**: Causes skin irritation
- **H319**: Causes serious eye irritation

**Abbreviations and acronyms**

- **ND**: Not Determined, **NA**: Not Applicable, **LD**: Lethal Dose, **LC**: Lethal Concentration, **ATE**: Acute Toxicity Estimates, **H**: hour, **°C**: °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
- **Physical**: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

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Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

Print date: 04/11/2019   EN (English US)   SDS ID: SIT8402.0
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
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