SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form
Physical state
Substance name
Product code
Formula
Synonyms
Chemical family

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

For research and industrial use only

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

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

GHS-US labelling

Signal word (GHS-US)
Hazard statements (GHS-US)

Precautionary statements (GHS-US)

2.2. Label elements

Full text of H-phrases: see section 16

2.3. Other hazards

Other hazards not contributing to the classification

Additional ethanol may be formed by reaction with moisture and water. 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. The US OSHA PEL (TWA) for ethanol is 1000 ppm. This product contains ethanol which is classified as a carcinogen by IARC in alcoholic beverages.
OCTYLTRIETHOXYSILANE, oligomeric hydrolysate
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2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Multi-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>OCTYLTRIETHOXYSILANE, oligomeric hydrolysate</td>
</tr>
<tr>
<td>CAS No</td>
<td>1365031-14-0/236752-05-9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octyltriethoxysilane, oligomeric hydrolysate</td>
<td>(CAS No) 1365031-14-0/236752-05-9</td>
<td>95 - 100</td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>Di-n-ocetyltriethoxysiloxane</td>
<td>(CAS No) 26498-09-3</td>
<td>0 - 3</td>
<td>Eye Irrit. 2A, H310</td>
</tr>
<tr>
<td>n-Octyltriethoxysilane</td>
<td>(CAS No) 2943-75-1</td>
<td>0 - 2</td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

3.2. Mixture
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. If exposed or concerned: Get medical advice/attention.

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, both acute and delayed
Symptoms/injuries after inhalation
May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact
Causes skin irritation.
Symptoms/injuries after eye contact
Causes serious eye irritation.
Symptoms/injuries after ingestion
May be harmful if swallowed.
Chronic symptoms
On contact with water this compound liberates ethanal which is known to have a chronic effect on the central nervous system.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media

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

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".
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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. Sweep or shovel spills into appropriate container for disposal.

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 vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors.
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.
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: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Appearance: Clear liquid.
Color: Straw.
Odor: Mild.
Odor threshold: No data available
Refractive index: 1.454
pH: No data available
Relative evaporation rate (butyl acetate=1): No data available
Melting point: No data available
Freezing point: < 0 °C
Boiling point: No data available
Flash point: > 65 °C
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: 0.979
Solubility: Reacts with water.
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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
React with water and moisture in air, liberating ethanol.

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

10.5. Incompatible materials
Moisture. Water.

10.6. Hazardous decomposition products
Ethanol. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity
Not classified.

n-Octyltriethoxysilane (2943-75-1)
LD50 oral rat
≥ 5110 mg/kg

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.

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
This compound liberates ethanol on contact with moisture. Material generates ethanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating effect on overexposed tissue.

Symptoms/injuries after inhalation
May cause irritation to the respiratory tract.

Symptoms/injuries after skin contact
Causes skin irritation.

Symptoms/injuries after eye contact
Causes serious eye irritation.

Symptoms/injuries after ingestion
May be harmful if swallowed.

Chronic symptoms
On contact with water this compound liberates ethanol which is known to have a chronic effect on the central nervous system.

Reason for classification
Expert judgment

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available
OCTYLTRIETHOXYSILANE, oligomeric hydrolysate
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12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.6. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.
Effect on ozone layer: No additional information available
Effect on the global warming: No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations: Do not dispose of waste into sewer.
Waste disposal recommendations: 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
Transport by sea: No additional information available
Air transport: No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
Octyltriethoxysilane, oligomeric hydrolysate (1385031-14-0/236752-05-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory.
Di-n-octyltetraethoxydisiloxane (26496-09-3)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory
n-Octyltriethoxysilane (2943-75-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations
Octyltriethoxysilane, oligomeric hydrolysate (1385031-14-0/236752-05-9)
Listed on the Canadian NDSL (Non-Domestic Substances List)
Listed on the Korean ECL (Existing Chemicals List)
Di-n-octyltetraethoxydisiloxane (26496-09-3)

15.3. US State regulations
OCTYLTRIETHOXYSILANE, oligomeric hydrolysate (1385031-14-0/236752-05-9)
U.S. - California - Proposition 65 - Carcinogens List: No
U.S. - California - Proposition 65 - Developmental Toxicity: No
OCTYLTRIETHOXYSILANE, oligomeric hydrolysate
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SECTION 16: Other information

Abbreviations and acronyms

Full text of H-phrases:
- Eye Irrit. 2A: Serious eye damage/eye irritation Category 2A
- Skin Irrit. 2: Skin corrosion/irritation Category 2
- H315: Causes skin irritation
- H319: Causes serious eye irritation

HMIS III Rating
Health: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 2 Moderate Hazard
Physical: 1 Slight Hazard

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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