### SECTION 1: Identification

#### 1.1. Identification

<table>
<thead>
<tr>
<th>Product name</th>
<th>HEXADECYLTRIMETHOXYSILANE, 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>SIH5925.0</td>
</tr>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Formula</td>
<td>C19H42O3Si</td>
</tr>
<tr>
<td>Synonyms</td>
<td>TRIMETHOXYSILYHEXADECANE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ORGANOMETHOXYSILANE</td>
</tr>
</tbody>
</table>

#### 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

<table>
<thead>
<tr>
<th>GHS-US classification</th>
<th>H315 - Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation Category 2</td>
<td>H315 - Causes skin irritation</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation Category 2A</td>
<td>H319 - Causes serious eye irritation</td>
</tr>
</tbody>
</table>

Full text of H statements: see section 16

#### 2.2. GHS Label elements, including precautionary statements

<table>
<thead>
<tr>
<th>GHS US labeling</th>
<th>Hazard pictograms (GHS US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word (GHS US)</td>
<td>Warning</td>
</tr>
<tr>
<td>Hazard statements (GHS US)</td>
<td>H315 - Causes skin irritation</td>
</tr>
<tr>
<td>Precautionary statements (GHS US)</td>
<td>P280 - Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 - If on skin: Wash with plenty of soap and water P332+P313 - If skin irritation occurs: Get medical advice/attention. P335+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. P524 - Wash hands thoroughly after handling. P321 - Specific treatment (see first aid instructions on this label)</td>
</tr>
</tbody>
</table>

#### 2.3. Hazards not otherwise classified (HNOC)

Other hazards not contributing to the classification: Additional methanol may be formed by reaction with moisture and water. The US OSHA PEL (TWA) for methanol is 200 ppm.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>HEXADECYLTRIMETHOXYSILANE, 95%</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>16415-12-6</td>
</tr>
</tbody>
</table>
HEXADECYLTRIMETHOXYSILANE, 95%
Safety Data Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexadecyltrimethoxysilane</td>
<td>(CAS-No.) 16415-12-6</td>
<td>95 - 100</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

Full text of hazard classes and 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 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.

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.

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. Immediate medical attention and special treatment, if necessary
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 fomy 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: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Unsuitable extinguishing media: Do not use straight streams.

5.2. Specific hazards arising from the chemical
Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters
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 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
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 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.
Storage area : Store in a well-ventilated place. Store away from heat.

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:
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.
Molecular mass : 346.63 g/mol
Color : Straw.
Odor : Mild.
Odor threshold : No data available
Refractive index : 1.4356
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : -1 °C
Boiling point : 155 °C @ 0.2 mm Hg
Flash point : 122 °C
Auto-ignition temperature : 245
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : < 0.01 mm Hg @ 20°C
Relative vapor density at 20 °C : > 1
HEXADECYLTRIMETHOXYSILANE, 95%
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Relative density : 0.89
Solubility : Insoluble in water. Reacts with water.
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : 7 cSt
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 when stored 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
Moisture. Water.

10.6. Hazardous decomposition products
Methanol. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Hexadecyltrimethoxysilane (16415-12-6)
LD50 oral rat : > 2000 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

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
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.

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

<table>
<thead>
<tr>
<th>12.1. Toxicity</th>
<th>No additional information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.2. Persistence and degradability</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.3. Bioaccumulative potential</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.4. Mobility in soil</td>
<td>No additional information available</td>
</tr>
<tr>
<td>12.5. Other adverse effects</td>
<td>Other adverse effects: This substance may be hazardous to the environment. Effect on the ozone layer: No additional information available</td>
</tr>
</tbody>
</table>

# SECTION 13: Disposal considerations

<table>
<thead>
<tr>
<th>13.1. Disposal methods</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewage disposal recommendations</td>
<td>Do not dispose of waste into sewer.</td>
</tr>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>May be incinerated. Dispose in a safe manner in accordance with local/national regulations.</td>
</tr>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

# SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1. UN number</th>
<th>Not regulated for transport.</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Additional information</td>
<td>Other information: No supplementary information available.</td>
</tr>
</tbody>
</table>

## Transport by sea

| Air transport                    | No additional information available |

# SECTION 15: Regulatory information

## 15.1. US Federal regulations

**Hexadecyltrimethoxysilane (16415-12-6)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

## 15.2. International regulations

### CANADA

**Hexadecyltrimethoxysilane (16415-12-6)**
Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

**Hexadecyltrimethoxysilane (16415-12-6)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

**Hexadecyltrimethoxysilane (16415-12-6)**
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

## 15.3. US State regulations
HEXADECYLTRIMETHOXYSILANE, 95%
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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**: 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)
- **Physical**: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

Date of issue: 01/06/2015  Revision date: 10/25/2017  Version: 2.1

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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