SECTION 1: Identification

1.1. Identification

Product name: 7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCUMARIN, 10% in acetonitrile

Product code: SIC2266.8

Product form: Mixture

Physical state: Liquid

Formula: C15H19ClO3Si

Synonyms: UMBELLIFERONYLPROPYLDIMETHYLCHLOROSILANE

Chemical family: ORGANOCHLOROSILANE IN SOLVENT

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

Flammable liquids Category 2 H225 - Highly flammable liquid and vapor
Acute toxicity (oral) Category 4 H302 - Harmful if swallowed
Acute toxicity (dermal) Category 4 H312 - Harmful in contact with skin
Acute toxicity (inhalation/vapor) Category 4 H332 - Harmful if inhaled
Skin corrosion/irritation Category 1B H314 - Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1 H318 - Causes serious eye damage

Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H225 - Highly flammable liquid and vapor
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS US) : P280 - Wear protective gloves/protection clothing/eye protection/face protection.
P310 - Immediately call a doctor
P210 - Keep away from heat, open flames, sparks. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical equipment
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P301+P312 - If swallowed: Call a doctor if you feel unwell
P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower
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
7-[3-(CHLORODIMETHYLSILYL)PROP OXY]-4-METHYLC OUMARIN, 10% in acetonitrile
Safety Data Sheet

2.3. Hazards not otherwise classified (HNOC)
Other hazards not contributing to the classification: Hydrogen chloride may be formed by reaction with water and moisture in air. The US OSHA PEL (TWA) for hydrogen chloride is 5 ppm.

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>Acetonitrile</td>
<td>(CAS No.) 75-05-8</td>
<td>88 - 90</td>
<td>Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>7-[3-(Chlorodimethylsilyl)propoxy]-4-methylcoumarin</td>
<td>(CAS No.) 129119-77-3</td>
<td>10 - 12</td>
<td>Skin Corr. 1B, H314 Eye Dam. 1, H318</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. Get medical advice/attention.
First-aid measures after skin contact: Wash with plenty of soap and water. Get immediate 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 immediate 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/effect: Causes severe skin burns and eye damage.
Symptoms/effect after inhalation: May cause respiratory irritation.
Symptoms/effect after skin contact: Causes (severe) skin burns.
Symptoms/effect after eye contact: Causes serious eye damage.
Symptoms/effect 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
Unsuitable extinguishing media: Water.

5.2. Specific hazards arising from the chemical
Fire hazard: Highly flammable liquid and vapor. Irritating fumes of hydrogen chloride and organic acid vapors may develop when material is exposed to water or open flame.
Explosion hazard: May form flammable/explosive vapor-air mixture.

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.
7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile
Safety Data Sheet

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Eliminate every possible source of ignition. Use special care to avoid static electric charges.

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. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

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

Additional hazards when processed: Handle empty containers with care because residual vapors are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.
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

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.
Storage conditions: Keep container tightly closed. Keep in a cool place. Store locked up.
Storage area: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Acetonitrile (75-05-8)</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
<th>OSHA PEL (TWA) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TWA (ppm)</td>
<td>20 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH STEL (ppm)</td>
<td>60 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PEL (TWA) (ppm)</td>
<td>40 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 or face shield. Contact lenses should not be worn
7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile
Safety Data Sheet

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/acid gas (yellow 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 liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>310.85 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Straw.</td>
</tr>
<tr>
<td>Odor</td>
<td>Acrid.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</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>&gt; 100 °C @ 25 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>2 °C</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>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 5 mm Hg @ 25°C</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.8</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>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

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable in sealed containers stored under a dry inert atmosphere.

10.3. Possibility of hazardous reactions
Reacts with water and moisture in air, liberating hydrogen chloride.

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

10.5. Incompatible materials

10.6. Hazardous decomposition products
7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile
Safety Data Sheet

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity: Not classified

7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
<td>555.556 mg/kg body weight</td>
<td></td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1100 mg/kg body weight</td>
<td></td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>12.222 mg/l/4h</td>
<td></td>
</tr>
</tbody>
</table>

Acetonitrile (75-05-8)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>2460 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>2000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (ppm)</td>
<td>7551</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>500 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>2000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>7551 ppmV/4h</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>11 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>1.5 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/iritation: Causes severe skin burns and eye damage.

Serious eye damage/irritation: Causes serious eye damage.

Respiratory or skin sensitization:
- Eye Irritation - rabbit: 100 μL/24H; moderate irritation effect (Acetonitrile)

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
Symptoms/effects after inhalation: May cause respiratory irritation.
Symptoms/effects after skin contact: Causes (severe) skin burns.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: May be harmful if swallowed.
Reason for classification: Expert judgment

SECTION 12: Ecological information
12.1. Toxicity

Acetonitrile (75-05-8)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>1640 mg/l Fathead Minnow</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.
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.
# 7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile

## Safety Data Sheet

**Product/Packaging disposal recommendations**: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

**Additional information**: Handle empty containers with care because residual vapors are flammable.

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

## SECTION 14: Transport information

### 14.1. UN number

<table>
<thead>
<tr>
<th>UN-No.(DOT)</th>
<th>UN-NA no. (DOT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2986</td>
<td>UN2986</td>
</tr>
</tbody>
</table>

### 14.2. UN proper shipping name

- **Transport document description**: UN2986 Chlorosilanes, corrosive, flammable, n.o.s. (7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile), 8 (3), II
- **Proper Shipping Name (DOT)**: Chlorosilanes, corrosive, flammable, n.o.s. (7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile)
- **Class (DOT)**: 8 - Class 8 - Corrosive material 49 CFR 173,136
- **Packing group (DOT)**: II - Medium Danger
- **Hazard labels (DOT)**: 8 - Corrosive 3 - Flammable liquid

### 14.3. Additional information

- **Emergency Response Guide (ERG) Number**: 155
- **Other information**: No supplementary information available.

### Transport by sea

- **DOT Vessel Stowage Location**: C - The material must be stowed “on deck only” on a cargo vessel and on a passenger vessel.
- **DOT Vessel Stowage Other**: 40 - Stow “clear of living quarters”

### Air transport

- **DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)**: Forbidden
- **DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)**: 30 L

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile

- **TSCA Exemption/Exclusion**: CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

- **7-[3-(Chlorodimethylsilyl)propoxy]-4-methylcoumarin (129119-77-3)**
  - Not listed on the United States TSCA (Toxic Substances Control Act) inventory

- **Acetonitrile (75-05-8)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

- No additional information available
7-[3-(CHLORODIMETHYLSILYL)PROPOXY]-4-METHYLCOUMARIN, 10% in acetonitrile
Safety Data Sheet

**Acetonitrile (75-05-8)**
Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**
No additional information available

**Acetonitrile (75-05-8)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**

**Acetonitrile (75-05-8)**
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the Korean ECL (Existing Chemicals List)

**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>H225</th>
<th>Highly flammable liquid and vapor</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</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**

3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

**Flammability**

4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

**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: 11/19/2015 Revision date: 04/08/2019 Version: 1.1

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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