# OCTAMETHYLCYCLOTETRASILOXANE, 98%

## Safety Data Sheet

**Date of issue:** 12/18/2014  
**Version:** 1.0

---

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

<table>
<thead>
<tr>
<th>1.1. Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form: Substance</td>
</tr>
<tr>
<td>Physical state: Liquid</td>
</tr>
<tr>
<td>Substance name: OCTAMETHYLCYCLOTETRASILOXANE, 98%</td>
</tr>
<tr>
<td>Product code: SIO6700.0</td>
</tr>
<tr>
<td>Formula: C8H24O4S</td>
</tr>
<tr>
<td>Synonyms: D4; CYCLIC TETRAMER; CYCLOMETHICONE; CYCLOHEXASILOXANE; CYCLOTETRASILOXANE</td>
</tr>
<tr>
<td>Chemical family: ORGANOSILOXANE</td>
</tr>
</tbody>
</table>

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

Use of the substance/mixture: Chemical intermediate
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

<table>
<thead>
<tr>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
</tr>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
</tr>
<tr>
<td>Eye Irrit. 2B</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

#### 2.2. Label elements

**GHS-US labeling**

<table>
<thead>
<tr>
<th>Hazard pictograms (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS02</td>
</tr>
<tr>
<td>GHS07</td>
</tr>
</tbody>
</table>

**Signal word (GHS-US):** Warning

**Hazard statements (GHS-US):**

- H226 - Flammable liquid and vapor
- H302+H312 - Harmful if swallowed or in contact with skin
- H320 - Causes eye irritation

**Precautionary statements (GHS-US):**

- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P264 - Wash hands thoroughly after handling
- 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
- P270 - Do not eat, drink or smoke when using this product
- P330 - Rinse mouth
- 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
- 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
OCTAMETHYLCYCLOTETRASILOXANE, 98%
Safety Data Sheet

2.3. Other hazards
No additional information available

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>Monoc-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>OCTAMETHYLCYCLOTETRASILOXANE, 98%</td>
</tr>
<tr>
<td>CAS No</td>
<td>556-67-2</td>
</tr>
<tr>
<td>EC no</td>
<td>209-136-7</td>
</tr>
<tr>
<td>EC index no</td>
<td>014-018-00-1</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>Octamethylcyclotetrasiloxane</td>
<td>(CAS No) 556-67-2</td>
<td>&gt; 98</td>
<td>Flam. Liq. 3, H226, Acute Tox. 4 (Oral), H302, Acute Tox. 4 (Dermal), H312, Eye Irrit. 2B, H320</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 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.

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 skin contact: Harmful in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Symptoms/injuries after eye contact: Causes eye irritation.

Symptoms/injuries after ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Fire hazard: Flammable liquid and vapor. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame. Liquid generates strong static charge when poured.

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

General measures: Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

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. Containers must be properly grounded before beginning transfer. Take precautionary measures against static discharge. Use only non-sparking tools.

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

Technical measures: Ground/bond container and receiving equipment.

Storage conditions: Keep container tightly closed. Store in a cool area.


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: 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

Physical state: Liquid

Appearance: Clear liquid.

Molecular mass: 296.61 g/mol

Color: No data available

Odor: Odorless.

Odor threshold: No data available

Refractive index: 1.3968

pH: No data available

Relative evaporation rate (butyl acetate=1): No data available

Melting point: No data available

Freezing point: 17.4 °C
OCTAMETHYLCYCLOTETRASILOXANE, 98%
Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point</td>
<td>175 - 176 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>51 °C</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>314 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>400 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Flammable liquid and vapor</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>1 mm Hg @ 23°C</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>1.03 mPa</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.956</td>
</tr>
<tr>
<td>VOC content</td>
<td>100 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water. Water: 50 mg/l</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>2.3 cSt</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>Explosive limits</td>
<td>0.75 - 7.4 vol % (lower; upper)</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 in a cool place.

10.3. Possibility of hazardous reactions
Bases can cause non-hazardous polymerization.

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

10.5. Incompatible materials
Oxidizing agent. Peroxides.

10.6. Hazardous decomposition products
Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Oral: Harmful if swallowed. Dermal: Harmful in contact with skin.

<table>
<thead>
<tr>
<th>Octamethylcyclotetrasiloxane (556-67-2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1540 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>1770 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>794 µg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>36 g/m³ (Exposure time: 4 h)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1540.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1770.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>36.000 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>36.000 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
Skin Irritation - rabbit: 500 mg/24H: mild

Serious eye damage/irritation: Causes eye irritation.
Eye Irritation - rabbit: 500 mg/24H: mild

Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity : Not classified
The classification is based on reproductive studies in animals.
Octamethylcyclotetrasiloxane: Rat TDLo (Inhalation) 500 ppm, male 70 days and 70 days prior
to mating - 3 weeks after birth prior to mating. Toxic Effects: Effects on Newborn - Live birth index.

Specific target organ toxicity (single exposure) : Not classified
Specific target organ toxicity (repeated exposure) : Not classified
Aspiration hazard : Not classified
Symptoms/injuries after skin contact : Harmful in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/injuries after eye contact : Causes eye irritation.
Symptoms/injuries after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - water : May cause long lasting harmful effects to aquatic life.
Octamethylcyclotetrasiloxane (556-67-2)
LC50 fish 1 > 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
LC50 fish 2 > 1000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

12.2. Persistence and degradability
Octamethylcyclotetrasiloxane (556-67-2)
Persistence and degradability : May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential
Octamethylcyclotetrasiloxane (556-67-2)
BCF fish 1 12400
Log Pow 5.1

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 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
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
UN-No.(DOT) : 1993
DOT NA no. UN1993

14.2. UN proper shipping name
Proper Shipping Name (DOT) : Flammable liquids, n.o.s.
(OCTAMETHYLCYCLOTETRASILOXANE)
Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT) : 3 - Flammable liquid

DOT Symbols : G - Identifies PSN requiring a technical name
OCTAMETHYLCYCLOTETRASILOXANE, 98%
Safety Data Sheet

<table>
<thead>
<tr>
<th>Packing group (DOT)</th>
<th>III - Minor Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Packaging Exceptions (49 CFR 173.xxx)</td>
<td>150</td>
</tr>
<tr>
<td>DOT Packaging Non Bulk (49 CFR 173.xxx)</td>
<td>203</td>
</tr>
<tr>
<td>DOT Packaging Bulk (49 CFR 173.xxx)</td>
<td>242</td>
</tr>
</tbody>
</table>

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

Transport by sea
DOT Vessel Stowage Location : A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.

Air transport
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

SECTION 15: Regulatory information

15.1. US Federal regulations
Octamethylcyclotetrasiloxane (556-67-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
EPA TSCA Regulatory Flag : T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

15.2. International regulations
Octamethylcyclotetrasiloxane (556-67-2)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

<table>
<thead>
<tr>
<th>OCTAMETHYLCYCLOTETRASILOXANE, 98%(556-67-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</td>
</tr>
</tbody>
</table>

Octamethylcyclotetrasiloxane (556-67-2)
| U.S. - California - Proposition 65 - Carcinogens List | No |
| U.S. - California - Proposition 65 - Developmental Toxicity | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No |

No significance risk level (NSRL)

Octamethylcyclotetrasiloxane (556-67-2)
U.S. - Maine - Chemicals of High Concern
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Chemicals of High Concern - Persistent Bioaccumulative Toxins
U.S. - Oregon - Priority Persistent Pollutant - Tier I - Persistent Pollutants
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
OCTAMETHYLCYCLOTETRASILOXANE, 98%
Safety Data Sheet

SECTION 16: Other information

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.

Full text of H-phrases:
- Acute Tox. 4 (Dermal) = Acute toxicity (dermal) Category 4
- Acute Tox. 4 (Oral) = Acute toxicity (oral) Category 4
- Eye Irrit. 2B = Serious eye damage/eye irritation Category 2B
- Flam. Liq. 3 = Flammable liquids Category 3
- H226 = Flammable liquid and vapor
- H302 = Harmful if swallowed
- H312 = Harmful in contact with skin
- H320 = Causes eye irritation

HMIS III Rating
- Health: 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability: 2 Moderate Hazard
- Physical: 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 12/18/2014
Version: 1.0

SDS US (GHS HazCom 2012) - Custom
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

© 2014 Gelest Inc. Morrisville, PA 19067