

**OCTAMETHYLCYCLOTETRASILOXANE, 98%**

Safety Data Sheet SIO6700.0

Date of issue: 12/18/2014

Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form	: Substance
Physical state	: Liquid
Substance name	: OCTAMETHYLCYCLOTETRASILOXANE, 98%
Product code	: SIO6700.0
Formula	: C <sub>8</sub> H <sub>24</sub> O <sub>4</sub> Si <sub>4</sub>
Synonyms	: D4; CYCLIC TETRAMER; CYCLOMETHICONE; CYCLOHEXASILOXANE; CYCLOTETRASILOXANE
Chemical family	: ORGANOSILOXANE

**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](mailto:info@gelest.com) - [www.gelest.com](http://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****Classification (GHS-US)**

Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Eye Irrit. 2B	H320

Full text of H-phrases: see section 16

**2.2. Label elements****GHS-US labeling**

Hazard pictograms (GHS-US)



GHS02

GHS07

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

P312 - Call a doctor if you feel unwell  
P362+P364 - Take off contaminated clothing and wash it before reuse  
P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish  
P403+P235 - Keep in a cool place  
P501 - Dispose of contents/container to licensed waste disposal facility.

### 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

Substance type : Mono-constituent  
Name : OCTAMETHYLCYCLOTETRASILOXANE, 98%  
CAS No : 556-67-2  
EC no : 209-136-7  
EC index no : 014-018-00-1

Name	Product identifier	%	Classification (GHS-US)
Octamethylcyclotetrasiloxane	(CAS No) 556-67-2	> 98	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Irrit. 2B, H320

### 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 inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.

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

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

### 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.

# OCTAMETHYLCYCLOTETRASILOXANE, 98%

## Safety Data Sheet

### 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.

Incompatible materials : Oxidizing agent. Peroxides.

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

Boiling point	: 175 - 176 °C
Flash point	: 51 °C
Critical temperature	: 314 °C
Auto-ignition temperature	: 400 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor
Vapor pressure	: 1 mm Hg @ 23°C
Critical pressure	: 1.03 mPa
Relative vapor density at 20 °C	: > 1
Relative density	: 0.956
VOC content	: 100 %
Solubility	: Insoluble in water. Water: 50 mg/l
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 2.3 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.75 - 7.4 vol % (lower; upper)

### 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.

Octamethylcyclotetrasiloxane (556-67-2)	
LD50 oral rat	1540 mg/kg
LD50 dermal rat	1770 mg/kg
LD50 dermal rabbit	794 µl/kg
LC50 inhalation rat (mg/l)	36 g/m <sup>3</sup> (Exposure time: 4 h)
ATE US (oral)	1540.000 mg/kg body weight
ATE US (dermal)	1770.000 mg/kg body weight
ATE US (vapors)	36.000 mg/l/4h
ATE US (dust, mist)	36.000 mg/l/4h
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

# OCTAMETHYLCYCLOTETRASILOXANE, 98%

## Safety Data Sheet

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 inhalation	: May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.
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
-------------	---

# OCTAMETHYLCYCLOTETRAILOXANE, 98%

## Safety Data Sheet

Packing group (DOT) : III - Minor Danger  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 242

### 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 : 60 L  
(49 CFR 173.27)  
DOT Quantity Limitations Cargo aircraft only (49 : 220 L  
CFR 175.75)

## 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)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

### 15.3. US State regulations

#### OCTAMETHYLCYCLOTETRAILOXANE, 98%(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

#### Octamethylcyclotetrasiloxane (556-67-2)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	

#### 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