

**OCTAMETHYLCYCLOTETRASILOXANE, 98%****Safety Data Sheet SIO6700.0**

Date of issue: 12/18/2014

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Version: 2.0

**SECTION 1: Identification****1.1. Product identifier**

Product name : OCTAMETHYLCYCLOTETRASILOXANE, 98%  
 Product code : SIO6700.0  
 Product form : Substance  
 Physical state : Liquid  
 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. Recommended use of the chemical and restrictions on use**

Recommended use : 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: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

Flammable liquids Category 3	H226
Acute toxicity (oral) Category 4	H302
Acute toxicity (dermal) Category 4	H312
Serious eye damage/eye irritation Category 2B	H320
Reproductive toxicity Category 2	H361
Hazardous to the aquatic environment - Chronic Hazard Category 4	H413

Full text of H statements : see section 16

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

Hazard pictograms (GHS-US) :



GHS02



GHS07



GHS08

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  
 H361 - Suspected of damaging fertility or the unborn child  
 H413 - May cause long lasting harmful effects to aquatic life

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P308+P313 - If exposed or concerned: Get medical advice/attention  
 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

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P243 - Take precautionary measures against static discharge  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
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  
P322 - Specific treatment (see first aid instructions on this label)  
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  
P405 - Store locked up  
P501 - Dispose of contents/container to licensed waste disposal facility.

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

No additional information available

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

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : OCTAMETHYLCYCLOTETRASILOXANE, 98%  
CAS No : 556-67-2

Name	Product identifier	%	GHS-US classification
Octamethylcyclotetrasiloxane	(CAS No) 556-67-2	98 - 100	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Irrit. 2B, H320 Repr. 2, H361 Aquatic Chronic 4, H413

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

### 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, both acute and delayed

Symptoms/injuries : Suspected of damaging fertility or the unborn child.

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

Symptoms/injuries after skin contact : Harmful in contact with skin. Causes mild skin irritation.

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.

Unsuitable extinguishing media : None known.

### 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.

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### 5.3. Advice for firefighters

- 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

- General measures : Eliminate ignition sources. 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

Avoid release to the environment. 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. 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 : Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent accumulation of vapors. Take precautionary measures against static discharge. 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.
- Incompatible materials : Oxidizing agent. Peroxides.
- Storage area : Store in a well-ventilated place. Store away from heat.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Octamethylcyclotetrasiloxane (556-67-2)		
AIHA	WEEL TWA (ppm)	10 ppm

### 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.

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### 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	: Colorless.
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
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
Explosion 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, 98% (556-67-2)

ATE US (oral)	1540.000 mg/kg body weight
ATE US (dermal)	1770.000 mg/kg body weight

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Octamethylcyclotetrasiloxane (556-67-2)	
LD50 oral rat	1540 mg/kg RTECS Number: GZ4397000
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 None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child. 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.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	: Harmful in contact with skin. Causes mild skin irritation.
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.
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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

No additional information available

### 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

Effect on ozone layer	: No additional information available
Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
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Product/Packaging 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

Transport document description	: UN1993 Flammable liquids, n.o.s. (OCTAMETHYLCYCLOTETRASILOXANE), 3, III
Proper Shipping Name (DOT)	: Flammable liquids, n.o.s. (OCTAMETHYLCYCLOTETRASILOXANE)
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Symbols	: G - Identifies PSN requiring a technical name

#### 14.3. Additional information

Emergency Response Guide (ERG) Number	: 128
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.
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#### 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

<b>Octamethylcyclotetrasiloxane (556-67-2)</b>	
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

##### CANADA

<b>Octamethylcyclotetrasiloxane (556-67-2)</b>	
Listed on the Canadian DSL (Domestic Substances List)	

##### EU-Regulations

<b>Octamethylcyclotetrasiloxane (556-67-2)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	

##### National regulations

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### Octamethylcyclotetrasiloxane (556-67-2)

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 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)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Full text of H-phrases::

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H312	Harmful in contact with skin
H320	Causes eye irritation
H361	Suspected of damaging fertility or the unborn child
H413	May cause long lasting harmful effects to aquatic life

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.

### HMIS III 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 : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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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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