SAFETY DATA SHEET

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

1.1 Product identifiers

Product name: Octamethylcyclotetrasiloxane
Product Number: 235695
Brand: Aldrich
Index-No.: 014-018-00-1
CAS-No.: 556-67-2

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

Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone: +1 314 771-5765
Fax: +1 800 325-5052

1.4 Emergency telephone

Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
- Flammable liquids (Category 3), H226
- Reproductive toxicity (Category 2), H361
- Short-term (acute) aquatic hazard (Category 1), H400
- Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Warning
Hazard statement(s)
H226  Flammable liquid and vapor.
H361  Suspected of damaging fertility or the unborn child.
H410  Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P201  Obtain special instructions before use.
P202  Do not handle until all safety precautions have been read and understood.
P210  Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233  Keep container tightly closed.
P240  Ground/bond container and receiving equipment.
P241  Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242  Use only non-sparking tools.
P243  Take precautionary measures against static discharge.
P273  Avoid release to the environment.
P280  Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P308 + P313  IF exposed or concerned: Get medical advice/ attention.
P370 + P378  In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391  Collect spillage.
P403 + P235  Store in a well-ventilated place. Keep cool.
P405  Store locked up.
P501  Dispose of contents/ container to an approved waste disposal plant.

P201  Obtain special instructions before use.
P202  Do not handle until all safety precautions have been read and understood.
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2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octamethyldicyclosiloxane</td>
<td>Flam. Liq. 3; Repr. 2; Aquatic Acute 1; Aquatic Chronic 1; H226, H361, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 10</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.
SECTION 4: First aid measures

4.1 Description of first-aid measures

**General advice**
Show this material safety data sheet to the doctor in attendance.

**If inhaled**
After inhalation: fresh air. Call in physician.

**In case of skin contact**
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

**In case of eye contact**
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

**If swallowed**
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

**Suitable extinguishing media**
Carbon dioxide (CO2) Foam Dry powder

**Unsuitable extinguishing media**
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Silicon oxides
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures
Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Storage class
Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with workplace control parameters
### 8.2 Exposure controls

**Appropriate engineering controls**
Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

**Personal protective equipment**

**Eye/face protection**
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

- **Full contact**
  - Material: Nitrile rubber
  - Minimum layer thickness: 0.4 mm
  - Break through time: 480 min
  - Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

- **Splash contact**
  - Material: Nitrile rubber
  - Minimum layer thickness: 0.11 mm
  - Break through time: 30 min
  - Material tested: KCL 741 Dermatril® L

**Body Protection**
Flame retardant antistatic protective clothing.

**Respiratory protection**
required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**
Do not let product enter drains. Risk of explosion.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>556-67-2</td>
<td>TWA</td>
<td>10 ppm</td>
<td>USA. Workplace Environmental Exposure Levels (WEEL)</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color:</td>
<td>Colorless</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>weak</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Melting point/range: 17 - 18 °C (63 - 64 °F) - lit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>175 - 176 °C 347 - 349 °F - lit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>51 °C (124 °F) - closed cup - DIN 51755 Part 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Upper explosion limit: 19.5 % (V) at 1010 hPa Lower explosion limit: 0.61 % (V) at 1010 hPa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>1.3 hPa at 20 °C (68 °F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>0.956 g/mL at 25 °C (77 °F) - lit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>0.001 g/l at 25 °C (77 °F) - Hydrolysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>log Pow: 6.488 at 25.1 °C (77.2 °F) - Potential bioaccumulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>384 - 387 °C (723 - 729 °F) at 1,013 hPa - ASTM E-659</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>313 °C (595 °F) -</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>1.6 mm2/s at 20 °C (68 °F) - (calculated), (ECHA)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>none</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 9.2 Other safety information
No data available

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**SECTION 10: Stability and reactivity**

**10.1 Reactivity**
Vapor/air-mixtures are explosive at intense warming.

**10.2 Chemical stability**
The product is chemically stable under standard ambient conditions (room temperature).

**10.3 Possibility of hazardous reactions**
Violent reactions possible with:
Strong oxidizing agents

Aldrich - 235695
alkalines
acids

10.4 Conditions to avoid
Heating.

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male - > 4,800 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - 36 mg/l - dust/mist
(OECD Test Guideline 403)
LD50 Dermal - Rat - male and female - > 2,400 mg/kg
(OECD Test Guideline 402)
Remarks: (IUCLID)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: Does not cause skin sensitization.
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: Mouse lymphoma test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Micronucleus test
Species: Rat

Application Route: Inhalation
Method: OECD Test Guideline 475
Result: negative

Test Type: dominant lethal test
Species: Rat
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 478
Result: negative

**Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

**Reproductive toxicity**
Suspected of damaging fertility.

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

11.2 **Additional Information**
Repeted dose toxicity - Rabbit - male and female - Dermal - 21 d - NOAEL (No observed adverse effect level) - >= 960 mg/kg

RTECS: GZ4397000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

We have no description of any toxic symptoms.

Handle in accordance with good industrial hygiene and safety practice.

---

**SECTION 12: Ecological information**

12.1 **Toxicity**

Toxicity to fish
flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - > 0.022 mg/l - 96 h
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.

12.2 Persistence and degradability

Biodegradability
- Aerobic
  - Exposure time: 29 d
  - Result: 3.7% - Not readily biodegradable.
  - (OECD Test Guideline 310)

12.3 Bioaccumulative potential

Bioaccumulation
- Pimephales promelas (fathead minnow): 0.160 µg/l (Octamethylcyclotetrasiloxane)
  - Bioconcentration factor (BCF): 12,400
  - (US-EPA)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
- Waste material must be disposed of in accordance with the national and local regulations.
- Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

DOT (US)
- UN number: 1993
- Class: 3
- Packing group: III
- Proper shipping name: Flammable liquids, n.o.s. (Octamethylcyclotetrasiloxane)
- Reportable Quantity (RQ):
  - Poison Inhalation Hazard: No

IMDG
- UN number: 1993
- Class: 3
- Packing group: III
- EMS-No: F-E, S-E
- Proper shipping name: FLAMMABLE LIQUID, N.O.S. (Octamethylcyclotetrasiloxane)
Marine pollutant: yes

**IATA**
UN number: 1993  Class: 3  Packing group: III
Proper shipping name: Flammable liquid, n.o.s. (Octamethylyclotetrasiloxane)

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**SECTION 15: Regulatory information**

**SARA 302 Components**
This material does not contain any components with a section 302 EHS TPQ.

**SARA 313 Components**
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
Fire Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**
No components are subject to the Massachusetts Right to Know Act.

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**SECTION 16: Other information**

**Further information**
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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