

According to the UN GHS revision 8

Creation Date: April 30, 2026

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## 1. IDENTIFICATION

### 1.1 GHS Product identifier

Product name: Decamethylcyclopentasiloxane

Catalog Number: T21098

CAS Number: 541-02-6

### 1.2 Other means of identification

Other names: -

### 1.3 Recommended use of the chemical and restrictions on use

Identified uses: no data available

### 1.4 Supplier's details

Company: Targetmol Chemicals Inc.

Address: 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA

Tel/Fax: (781) 999-4286

### 1.5 Emergency phone number

Emergency phone number: 781-999-4286

Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

## 2. HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture

Not classified.

### 2.2 GHS label elements, including precautionary statements

Pictogram(s): unknown

Signal word: No signal word

Hazard statement(s): none

Precautionary statement(s):

Prevention: none

Response: none

Storage: none

Disposal: none

### 2.3 Other hazards which do not result in classification

no data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number
Decamethylcyclopentasiloxane	-	541-02-6	208-764-9

#### 4. FIRST-AID MEASURES

##### 4.1 Description of necessary first-aid measures

###### General advice

no data available

###### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

###### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

###### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

###### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

##### 4.2 Most important symptoms/effects, acute and delayed

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

##### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

#### 5. FIRE-FIGHTING MEASURES

##### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

##### 5.2 Specific hazards arising from the chemical

no data available

##### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 6. ACCIDENTAL RELEASE MEASURES

##### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

##### 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

##### 6.3 Methods and materials for containment and cleaning up

ACCIDENTAL RELEASE MEASURES: Personal precautions, protective equipment and emergency procedures: Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.; Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.; Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according

to local regulations. Keep in suitable, closed containers for disposal.

### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

#### 7.2 Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): Combustible liquids.

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

##### Occupational Exposure limit values

no data available

##### Biological limit values

no data available

#### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

#### 8.3 Individual protection measures, such as personal protective equipment (PPE)

##### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

##### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

##### Thermal hazards

no data available

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Color	no data available
Odour	no data available
Melting point/freezing point	-44°C
Boiling point or initial boiling point and boiling range	90°C/10mmHg(lit.)
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	73°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available

<b>pH</b>	no data available
<b>Kinematic viscosity</b>	3.9 cSt at 25 deg C
<b>Solubility</b>	DMSO: Soluble, ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
<b>N-octanol-water partition coefficient</b>	log Kow = 8.06 (average of 8.03, 8.07 and 8.09 measurements)
<b>Vapour pressure</b>	0.3 mm Hg at 25 deg C (OECD Guideline 104, Static Method Ebulliometer)
<b>Density and/or relative density</b>	0.958g/mL at 25°C (lit.)
<b>Relative vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

no data available

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

no data available

#### 10.4 Conditions to avoid

no data available

#### 10.5 Incompatible materials

Incompatible materials: Strong oxidizing agents.

#### 10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating vapors.

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Oral: no data available

Inhalation: no data available

Dermal: no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

no data available

#### Carcinogenicity

no data available

#### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

AEROBIC: Dimethyl siloxanes, in general, are highly resistant to biodegradation(1). Using OECD Guideline 310 (Ready Biodegradability - CO<sub>2</sub> in Sealed Vessels, Headspace Test) and an activated sewage sludge inoculum, decamethylcyclopentasiloxane, at 20 mg/L, reached only 0.14% of its theoretical CO<sub>2</sub> evolution in 28 days(2). Using OECD Guideline 308 (Aerobic and Anaerobic Transformation in Aquatic Sediment Systems) and sediment collected from Lake Pepin in Wisconsin, decamethylcyclopentasiloxane, at 130-270 ng/g dry weight, exhibited pseudo-first order half-lives of 1200 and 2700 days in aerobic non-sterile and sterilized sediment(2); half-lives of 800 and 3100 days were determined for anaerobic conditions(2). Polydimethylsiloxane does not biodegrade at an observable rate under normal conditions of environmental exposure(3); for example, a <sup>14</sup>C-labeled polydimethylsiloxane fluid showed no evidence of biodegradation when exposed to activated sludge over a period of 70 days(3).

### 12.3 Bioaccumulative potential

Using OECD Guideline 305 (Bioconcentration: Flow-through Fish Test), decamethylcyclopentasiloxane was found to have steady-state and kinetic BCF values of 7060 and 13000 in fathead minnow (*Pimephales promelas*) over a 70-day exposure period(1). A 65-day study using fathead minnow (*Pimephales promelas*) found whole body BCF values of 2900 to 15500(1). A 28-day study using flow-through conditions determined a BCF of 3300 in rainbow trout (*Oncorhynchus mykiss*)(1). According to a classification scheme(2), these BCF values suggest that bioconcentration in aquatic organisms is very high(SRC), provided the compound is not metabolized by the organism(SRC).

### 12.4 Mobility in soil

Adsorption studies using three soils from the United Kingdom (silt loam, sandy loam and sandy clay loam) determined decamethylcyclopentasiloxane log K<sub>oc</sub> values of 4.98-5.29 with an average log K<sub>oc</sub> of 5.17 (K<sub>oc</sub> of 1.48X10<sup>+5</sup>)(1). According to a classification scheme(2), these K<sub>oc</sub> values suggest that decamethylcyclopentasiloxane is expected to be immobile in soil.

### 12.5 Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## 14. TRANSPORT INFORMATION

### 14.1 UN Number

no data available

### 14.2 UN Proper Shipping Name

no data available

### 14.3 Transport hazard class(es)

no data available

### 14.4 Packing group, if applicable

no data available

### 14.5 Environmental hazards

no data available

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.
Korea Existing Chemicals List (KECL)	Listed.

## 16. OTHER INFORMATION

### Information on revision

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### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>  
HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>  
IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>  
eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)  
CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>  
ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

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ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

no data available

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