



# SILANOL TERMINATED POLYDIMETHYLSILOXANE

## Safety Data Sheet DMS-S14

Issue date: 10/27/2014

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Version: 2.1

### SECTION 1: Identification

#### 1.1. Identification

Product name : SILANOL TERMINATED POLYDIMETHYLSILOXANE  
 Product code : DMS-S14  
 Product form : Substance  
 Physical state : Liquid  
 Synonyms : HYDROXY TERMINATED POLYDIMETHYLSILOXANE  
 Chemical family : ORGANOSILOXANE

#### 1.2. Recommended use and restrictions on use

Recommended use : Chemical intermediate

#### 1.3. Supplier

##### 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

Reproductive toxicity Category 2 H361 Suspected of damaging fertility or the unborn child

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H361 - Suspected of damaging fertility or the unborn child

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.  
 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)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Substance type : Polymer  
 Name : SILANOL TERMINATED POLYDIMETHYLSILOXANE  
 CAS-No. : 70131-67-8

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Name	Product identifier	%	GHS US classification
Silanol terminated polydimethylsiloxane	(CAS-No.) 70131-67-8	> 95	Not classified
Decamethylcyclopentasiloxane	(CAS-No.) 541-02-6	1.1 – 1.8	Flam. Liq. 4, H227
Octamethylcyclotetrasiloxane	(CAS-No.) 556-67-2	1.1 – 1.7	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 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

## 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.
- 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. 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 (acute and delayed)

- Symptoms/effects after inhalation : May be harmful if inhaled.
- Symptoms/effects after skin contact : May cause skin irritation.
- Symptoms/effects after eye contact : May cause eye irritation.
- Symptoms/effects after ingestion : No information available.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Water fog. Foam. Carbon dioxide. Dry chemical.
- Unsuitable extinguishing media : None known.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. 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

#### 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

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. Sweep or shovel spills into appropriate container for disposal.

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### 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Spillage of this material may create a slippery condition for foot or vehicle traffic. Use only in well ventilated areas.

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

Storage conditions : Keep container tightly closed. Store locked up.

Incompatible materials : Oxidizing agent.

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. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Avoid all unnecessary 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.

## SECTION 9: Physical and chemical properties

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

Physical state : Liquid

Appearance : Clear liquid.

Molecular mass : 700 – 1500 g/mol

Color : Colorless.

Odor : Characteristic.

Odor threshold : No data available

Refractive index : 1.402

pH : No data available

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

Melting point : No data available

Freezing point : No data available

Boiling point : 150 °C

Flash point : > 101.1 °C closed cup

Auto-ignition temperature : 420 °C

Decomposition temperature : No data available

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Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.98
% Volatiles	: < 5 %
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: 35 – 45 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

### 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.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Formaldehyde. Organic acid vapors. Silicon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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 mg/kg body weight
ATE US (dermal)	794 mg/kg body weight
ATE US (vapors)	36 mg/l/4h
ATE US (dust, mist)	36 mg/l/4h

Silanol terminated polydimethylsiloxane (70131-67-8)	
LD50 oral rat	> 15400 mg/kg
LD50 dermal rabbit	> 16 ml/kg
LC50 inhalation rat (mg/l)	> 8750 mg/m <sup>3</sup> (Exposure time: 7 h)

Decamethylcyclopentasiloxane (541-02-6)	
LD50 oral rat	> 24134 mg/kg
LD50 dermal rabbit	> 16 ml/kg
LC50 inhalation rat	(lethal concentration)
Toxicity information	> 2700 mg/m <sup>3</sup> (lethal concentration: inhalation, rat)

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified

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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.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May be harmful if inhaled.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### 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
Partition coefficient n-octanol/water (Log Pow)	5.1

#### Decamethylcyclopentasiloxane (541-02-6)

Partition coefficient n-octanol/water (Log Kow)	5.5
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### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the ozone layer : No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

Not regulated for transport.

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information : No supplementary information available.

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

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### 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 final TSCA section 4 test rule.

### Silanol terminated polydimethylsiloxane (70131-67-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### Decamethylcyclopentasiloxane (541-02-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

## 15.2. International regulations

### CANADA

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

Listed on the Canadian DSL (Domestic Substances List)

#### Silanol terminated polydimethylsiloxane (70131-67-8)

Listed on the Canadian DSL (Domestic Substances List)

#### Decamethylcyclopentasiloxane (541-02-6)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

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

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Decamethylcyclopentasiloxane (541-02-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

#### 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 KECL/KECI (Korean Existing Chemicals Inventory)  
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)

#### Silanol terminated polydimethylsiloxane (70131-67-8)

Listed on the AICS (Australian Inventory of Chemical Substances)  
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Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Decamethylcyclopentasiloxane (541-02-6)

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

## 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

Full text of H-phrases::

H226	Flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H320	Causes eye irritation
H361	Suspected of damaging fertility or the unborn child



# SILANOL TERMINATED POLYDIMETHYLSILOXANE

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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; APF: Assigned Protection Factor.

### Hazard Rating

#### Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

#### Flammability

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

#### 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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