DODECAMETHYLPENTASILOXANE

Safety Data Sheet SID4626.0

Issue date: 11/04/2014 Revision date: 08/16/2022 Version: 2.0

SECTION 1: Identification

1.1. Identification

Product name : DODECAMETHYLPENTASILOXANE

Product code : SID4626.0

Product form : Substance

Physical state : Liquid

Formula : C12H36O4Si5

Synonyms : MD3M; POLY(DIMETHYLSILOXANE), TRIMETHYLSILOXY TERMINATED

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 - 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 4 H227 Combustible liquid

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Signal word (GHS US) : Warning

Hazard statements (GHS US) : H227 - Combustible liquid

Precautionary statements (GHS US) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat, open flames, sparks. - No smoking.
P370+P378 - In case of fire: Use water spray or fog, 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. 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 : Multi-constituent

Name : DODECAMETHYLPENTASILOXANE

CAS-No. : 141-63-9

Name	Product identifier	%	GHS US classification
Dodecamethylpentasiloxane	(CAS-No.) 141-63-9	> 90	Flam. Liq. 4, H227
Decamethyltetrasiloxane	(CAS-No.) 141-62-8	< 5	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302
Octamethylcyclotetrasiloxane	(CAS-No.) 556-67-2	< 3	Flam. Liq. 3, H226 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.

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 (acute and delayed)

Symptoms/effects after inhalation : No information available.

Symptoms/effects after skin contact : May cause skin irritation.

Symptoms/effects after eye contact : May cause eye irritation.

Symptoms/effects after ingestion : May be harmful if swallowed.

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 : Combustible liquid. 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

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.

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

Additional hazards when processed : Keep away from heat, open flames, sparks. - No smoking.

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	:	Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	:	Keep container tightly closed.
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:

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	:	384.84 g/mol
Color	:	No data available
Odor	:	No data available
Odor threshold	:	No data available
Refractive index	:	1.3925
pH	:	No data available
Relative evaporation rate (butyl acetate=1)	:	< 1
Melting point	:	-80 °C
Freezing point	:	No data available
Boiling point	:	91 °C @ 3 mm Hg
Flash point	:	70 °C
Auto-ignition temperature	:	430 °C
Decomposition temperature	:	No data available
Flammability	:	Combustible liquid
Vapor pressure	:	3 mm Hg @ 91°C
Relative vapor density at 20 °C	:	> 1
Relative density	:	0.876
% Volatiles	:	100 %
Solubility	:	Insoluble in water. Water: Solubility parameter: 7.1
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Partition coefficient n-octanol/water (Log Kow)	:	No data available
Viscosity, kinematic	:	2.06 cSt @ 25°C

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

Decamethyltetrasiloxane (141-62-8)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000
LC50 inhalation rat	> 5080 mg/l 6 hour

Octamethylcyclotetrasiloxane (556-67-2)	
LD50 oral rat	> 4800 mg/kg
LD50 dermal rat	> 2375 mg/kg
LC50 Inhalation - Rat	36 g/m³ (Exposure time: 4 h)

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Symptoms/effects after inhalation	:	No information available.
Symptoms/effects after skin contact	:	May cause skin irritation.
Symptoms/effects after eye contact	:	May cause eye irritation.
Symptoms/effects after ingestion	:	May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Octamethylcyclotetrasiloxane (556-67-2)	
LC50 - Fish [1]	> 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)

Octamethylcyclotetrasiloxane (556-67-2)	
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

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

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

DOT NA No NA1993

14.2. UN proper shipping name

Transport document description (DOT) : NA1993 Combustible liquid, n.o.s. (DODECAMETHYLPENTASILOXANE), 3, III

Proper Shipping Name (DOT) : Combustible liquid, n.o.s. (DODECAMETHYLPENTASILOXANE)

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name

14.3. Additional information

Other information : This product is Combustible as defined by the US Department of Transportation (DOT). It is regulated for transport in the US in container > 119 gallons (450 liters). The product is not regulated for transport by the IATA, ADR/RID, ADNR or the IMDG regulations. Therefore, no UN# is applicable to this product.

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 (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

Commercial status of components according to the United States Environmental Protection Agency’s Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Dodecamethylpentasiloxane	141-63-9	Present	Active	
Decamethyltetrasiloxane	141-62-8	Present	Active	

Name	CAS-No.	Listing	Commercial status	Flags
Octamethylcyclotetrasiloxane	556-67-2	Present	Active	T

15.2. International regulations

CANADA

Dodecamethylpentasiloxane (141-63-9)
Listed on the Canadian DSL (Domestic Substances List)

Decamethyltetrasiloxane (141-62-8)
Listed on the Canadian DSL (Domestic Substances List)

Octamethylcyclotetrasiloxane (556-67-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Dodecamethylpentasiloxane (141-63-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Decamethyltetrasiloxane (141-62-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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

National regulations

Dodecamethylpentasiloxane (141-63-9)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) 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 NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the NCI (Vietnam - National Chemical Inventory) Listed on the TCSI (Taiwan Chemical Substance Inventory) Listed on TECI (Thailand Existing Chemicals Inventory)

Decamethyltetrasiloxane (141-62-8)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) 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 NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory) Listed on the NCI (Vietnam - National Chemical Inventory) Listed on TECI (Thailand Existing Chemicals Inventory)

Octamethylcyclotetrasiloxane (556-67-2)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) 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) Listed on the TCSI (Taiwan Chemical Substance Inventory) Listed on the NCI (Vietnam - National Chemical Inventory)

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
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.: Chemcial 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 : 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.

Issue date: 11/04/2014 Revision date: 08/16/2022 Version: 2.0

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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