METHACRYLOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE

Safety Data Sheet DMS-R05

Issue date: 11/12/2014 Revision date: 02/15/2023 Version: 2.2

SECTION 1: Identification

1.1. Identification

Product name	:	METHACRYLOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE
Product code	:	DMS-R05
Product form	:	Substance
Physical state	:	Liquid
Synonyms	:	METHACRYLATE FUNCTIONAL SILICONE OIL; POLY(DIMETHYLSILOXANE), METHACRYLOXYPROPYL 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

Serious eye damage/eye irritation Category 2A H319 Causes serious eye irritation
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)	:	H319 - Causes serious eye irritation
Precautionary statements (GHS US)	:	P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection. 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.

2.3. Hazards not otherwise classified (HNOC)

Other hazards which do not result in classification	:	Low molecular weight methacrylates have been found to sensitize certain individuals, resulting in severe itching and hives.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : METHACRYLOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE
CAS-No. : 58130-03-3

Name	Product identifier	%	GHS US classification
Methacryloxypropyl terminated polydimethylsiloxane	CAS-No.: 58130-03-3	> 95	Eye Irrit. 2A, H319
2,6-Di-tert-butyl-p-cresol	CAS-No.: 128-37-0	< 1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Hydroquinone monomethyl ether	CAS-No.: 150-76-5	< 0.05	Acute Tox. 4 (Oral), H302 Eye Irrit. 2B, H320 Skin Sens. 1, H317

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 : Causes serious 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

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.

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.

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

Storage conditions : Keep container tightly closed. Store < 5°C.

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

Hydroquinone monomethyl ether (150-76-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	5 mg/m³

2,6-Di-tert-butyl-p-cresol (128-37-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Butylated hydroxytoluene
ACGIH OEL TWA	2 mg/m³ (IFV - Inhalable fraction and vapor)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2023
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	10 mg/m³

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:
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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear liquid.
Molecular mass	:	380 – 550 g/mol
Color	:	Pale yellow.
Odor	:	No data available
Odor threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butyl acetate=1)	:	< 1
Melting point	:	< -60 °C
Freezing point	:	No data available
Boiling point	:	> 205 °C
Flash point	:	> 110 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	> 1
Relative density	:	0.97
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	:	4 – 6 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

Non-hazardous polymerization may occur.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

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

Hydroquinone monomethyl ether (150-76-5)	
LD50 oral rat	1600 mg/kg

2,6-Di-tert-butyl-p-cresol (128-37-0)	
LD50 oral rat	890 mg/kg
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg Source: ECHA

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified

2,6-Di-tert-butyl-p-cresol (128-37-0)	
NOAEL (chronic,oral,animal/male,2 years)	25 mg/kg body weight Animal: rat, Animal sex: male
IARC group	3 - Not classifiable

Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	Low molecular weight methacrylates have been found to sensitize certain individuals, resulting in severe itching and hives.
Symptoms/effects after inhalation	:	No information available.
Symptoms/effects after skin contact	:	May cause skin irritation.
Symptoms/effects after eye contact	:	Causes serious eye irritation.
Symptoms/effects after ingestion	:	No information available.
Reason for classification	:	Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Hydroquinone monomethyl ether (150-76-5)	
LC50 - Fish [1]	84.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	28.5 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

2,6-Di-tert-butyl-p-cresol (128-37-0)	
LC50 - Fish [1]	> 0.57 mg/l Source: EHCA
EC50 - Crustacea [1]	0.48 mg/l Source: ECHA
EC50 72h - Algae [1]	6 mg/l (Species: Pseudokirchneriella subcapitata)
EC50 72h - Algae [2]	> 0.42 mg/l (Species: Desmodesmus subspicatus)
LOEC (chronic)	1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.023 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Hydroquinone monomethyl ether (150-76-5)	
Partition coefficient n-octanol/water (Log Pow)	1.34

2,6-Di-tert-butyl-p-cresol (128-37-0)	
BCF - Fish [1]	230 – 2500
Partition coefficient n-octanol/water (Log Pow)	4.17

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.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not applicable	Not applicable	Not applicable	Not applicable
Transport document description			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT
No data available

TDG
No data available

IMDG
No data available

IATA
No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

METHACRYLOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE (58130-03-3)	
TSCA Exemption/Exclusion	CAUTION: This material is supplied for research and development purposes subject to the RD exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

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
Methacryloxypropyl terminated polydimethylsiloxane	58130-03-3	Not present	-	
Hydroquinone monomethyl ether	150-76-5	Present	Active	T
2,6-Di-tert-butyl-p-cresol	128-37-0	Present	Active	

15.2. International regulations

CANADA

Methacryloxypropyl terminated polydimethylsiloxane (58130-03-3)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

Hydroquinone monomethyl ether (150-76-5)

Listed on the Canadian DSL (Domestic Substances List)

2,6-Di-tert-butyl-p-cresol (128-37-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Hydroquinone monomethyl ether (150-76-5)

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

2,6-Di-tert-butyl-p-cresol (128-37-0)

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

National regulations

Methacryloxypropyl terminated polydimethylsiloxane (58130-03-3)

Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

Hydroquinone monomethyl ether (150-76-5)

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)

2,6-Di-tert-butyl-p-cresol (128-37-0)

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)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
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)
Listed on TECI (Thailand Existing Chemicals 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

Hydroquinone monomethyl ether (150-76-5)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

2,6-Di-tert-butyl-p-cresol (128-37-0)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H320	Causes eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

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 : 2 Moderate Hazard - Temporary or minor injury may occur
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