

Safety data sheet

acc. to Safe Work Australia - Code of Practice



Silicone oil OF-OH 50 organo functional

article number: **4076**

Version: **GHS 2.0 en**

Replaces version of: 2021-10-25

Version: (GHS 1)

date of compilation: 2021-10-25

Revision: 2024-02-22

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

1.1 Product identifier

Identification of the substance

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

Relevant identified uses:

Laboratory chemical
Laboratory and analytical use

Uses advised against:

Do not use for private purposes (household).
Food, drink and animal feedingstuffs.

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 Westmead, NSW	131126	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

This substance does not meet the criteria for classification.

2.2 Label elements

Labelling

not required

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2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance

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Impurities/additives/constituents:

Name of substance	Identifier	Wt%
Decamethylcyclopentasiloxane	CAS No 541-02-6 EC No 208-764-9	1 – < 3
Dodecamethylcyclohexasiloxane	CAS No 540-97-6 EC No 208-762-8	< 1
Octamethylcyclotetrasiloxane	CAS No 556-67-2 EC No 209-136-7	< 1

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!
water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

No special measures are necessary.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Relevant DNELs of components						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Decamethylcyclopentasiloxane	541-02-6	DNEL	97.3 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Decamethylcyclopentasiloxane	541-02-6	DNEL	97.3 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Decamethylcyclopentasiloxane	541-02-6	DNEL	24.2 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Decamethylcyclopentasiloxane	541-02-6	DNEL	24.2 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Dodecamethylcyclohexasiloxane	540-97-6	DNEL	11 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Dodecamethylcyclohexasiloxane	540-97-6	DNEL	1.22 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Dodecamethylcyclohexasiloxane	540-97-6	DNEL	6.1 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Octamethylcyclotetrasiloxane	556-67-2	DNEL	73 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Octamethylcyclotetrasiloxane	556-67-2	DNEL	73 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects

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Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Octamethylcyclotetrasiloxane	556-67-2	DNEL	73 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Octamethylcyclotetrasiloxane	556-67-2	DNEL	73 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Decamethylcyclopentasiloxane	541-02-6	PNEC	1.2 µg/l	aquatic organisms	freshwater	short-term (single instance)
Decamethylcyclopentasiloxane	541-02-6	PNEC	0.12 µg/l	aquatic organisms	marine water	short-term (single instance)
Decamethylcyclopentasiloxane	541-02-6	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Decamethylcyclopentasiloxane	541-02-6	PNEC	11 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Decamethylcyclopentasiloxane	541-02-6	PNEC	1.1 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Decamethylcyclopentasiloxane	541-02-6	PNEC	1.27 mg/kg	terrestrial organisms	soil	short-term (single instance)
Dodecamethylcyclohexasiloxane	540-97-6	PNEC	1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Dodecamethylcyclohexasiloxane	540-97-6	PNEC	13 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Dodecamethylcyclohexasiloxane	540-97-6	PNEC	1.3 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Dodecamethylcyclohexasiloxane	540-97-6	PNEC	3.77 mg/kg	terrestrial organisms	soil	short-term (single instance)
Octamethylcyclotetrasiloxane	556-67-2	PNEC	1.5 µg/l	aquatic organisms	freshwater	short-term (single instance)
Octamethylcyclotetrasiloxane	556-67-2	PNEC	0.15 µg/l	aquatic organisms	marine water	short-term (single instance)
Octamethylcyclotetrasiloxane	556-67-2	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Octamethylcyclotetrasiloxane	556-67-2	PNEC	3 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Octamethylcyclotetrasiloxane	556-67-2	PNEC	0.3 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Octamethylcyclotetrasiloxane	556-67-2	PNEC	0.54 mg/kg	terrestrial organisms	soil	short-term (single instance)

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8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	faintly perceptible
Melting point/freezing point	-50 °C
Boiling point or initial boiling point and boiling range	170 °C at 1,013 hPa

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Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	>100 °C
Auto-ignition temperature	not determined
Decomposition temperature	>250 °C
pH (value)	not determined
Kinematic viscosity	21 mm ² /s at 20 °C
Dynamic viscosity	30 – 60 mPa s at 25 °C
<u>Solubility(ies)</u>	
Water solubility	not determined
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	this information is not available
<u>Vapour pressure</u>	
	7 hPa at 20 °C 22 hPa at 50 °C
<u>Density and/or relative density</u>	
Density	0.97 g/cm ³ at 25 °C
Relative vapour density	Information on this property is not available.
Particle characteristics	not relevant (liquid)
<u>Other safety parameters</u>	
Oxidising properties	none

9.2 Other information

Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics:	There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

If heated

Vapours may form explosive mixtures with air.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

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10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser

10.4 Conditions to avoid

Keep away from heat. Decomposition takes place from temperatures above: >250 °C.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

This substance does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	>5,000 mg/kg	rat		TOXNET

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Decamethylcyclopentasiloxane	541-02-6	oral	LD50	>5,000 mg/kg	rat
Decamethylcyclopentasiloxane	541-02-6	inhalation: dust/mist	LC50	8.67 mg/l/4h	rat
Decamethylcyclopentasiloxane	541-02-6	dermal	LD50	>2,000 mg/kg	rabbit
Dodecamethylcyclohexasiloxane	540-97-6	oral	LD50	>2,000 mg/kg	rat
Dodecamethylcyclohexasiloxane	540-97-6	dermal	LD50	>2,000 mg/kg	rat
Octamethylcyclotetrasiloxane	556-67-2	oral	LD50	>4,800 mg/kg	rat
Octamethylcyclotetrasiloxane	556-67-2	inhalation: dust/mist	LC50	36 mg/l/4h	rat

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

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Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

Data are not available.

• If in eyes

Data are not available.

• If inhaled

Data are not available.

• If on skin

Data are not available.

• Other information

Health effects are not known.

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute) of components					
Name of sub-stance	CAS No	Endpoint	Value	Species	Exposure time
Decamethylcyclopentasiloxane	541-02-6	LC50	$>16 \mu\text{g/l}$	fish	96 h
Decamethylcyclopentasiloxane	541-02-6	EC50	$>2.9 \mu\text{g/l}$	aquatic invertebrates	48 h
Dodecamethylcyclohexasiloxane	540-97-6	ErC50	$>2 \mu\text{g/l}$	algae	72 h
Octamethylcyclotetrasiloxane	556-67-2	LC50	$>22 \mu\text{g/l}$	fish	96 h
Octamethylcyclotetrasiloxane	556-67-2	EC50	$>15 \mu\text{g/l}$	aquatic invertebrates	48 h

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Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Octamethylcyclotetrasiloxane	556-67-2	ErC50	>22 µg/l	algae	96 h

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Decamethylcyclopentasiloxane	541-02-6	EC50	>15 µg/l	aquatic invertebrates	21 d
Dodecamethylcyclohexasiloxane	540-97-6	EC50	>100 mg/l	microorganisms	3 h
Octamethylcyclotetrasiloxane	556-67-2	EC50	>15 µg/l	aquatic invertebrates	21 d

12.2 Persistence and degradability

Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Decamethylcyclopentasiloxane	541-02-6	carbon dioxide generation	0.14 %	28 d		ECHA
Dodecamethylcyclohexasiloxane	540-97-6	carbon dioxide generation	4.47 %	28 d		ECHA
Octamethylcyclotetrasiloxane	556-67-2	carbon dioxide generation	3.7 %	29 d		ECHA

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Decamethylcyclopentasiloxane	541-02-6	7,060	8.023 (25.3 °C)	
Dodecamethylcyclohexasiloxane	540-97-6	1,160	8.87 (23.6 °C)	
Octamethylcyclotetrasiloxane	556-67-2	12,400	6.488 (25.1 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

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Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

- | | |
|---|---|
| 14.1 UN number | not subject to transport regulations |
| 14.2 UN proper shipping name | not assigned |
| 14.3 Transport hazard class(es) | not assigned |
| 14.4 Packing group | not assigned |
| 14.5 Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user | |
| There is no additional information. | |
| 14.7 Transport in bulk according to IMO instruments | |
| The cargo is not intended to be carried in bulk. | |
| 14.8 Information for each of the UN Model Regulations | |
| Transport information National regulationsAdditional information(UN RTDG) | |
| Not subject to transport regulations. UN RTDG | |
| International Maritime Dangerous Goods Code (IMDG) - Additional information | |
| Not subject to IMDG. | |
| International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information | |
| Not subject to ICAO-IATA. | |

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

There is no additional information.

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.3	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. Containing a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	\equiv EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association

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Abbr.	Descriptions of used abbreviations
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.