



SAFETY DATA SHEET DOWSIL 54 ADDITIVE

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

1.1. Product identifier

Product name	DOWSIL 54 ADDITIVE
Product number	52551
Synonyms; trade names	DOW CORNING 54 ADDITIVE
REACH registration notes	Exempt -polymer exempt by Article 2(9)
CAS number	68957-00-6

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

Identified uses	Lubricant. Lubricant. Additive
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1.3. Details of the supplier of the safety data sheet

Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com
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1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	52551

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms



Hazard statements	H411 Toxic to aquatic life with long lasting effects.
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Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 Keep only in original packaging. P273 Avoid release to the environment. P391 Collect spillage. P403 Store in a well-ventilated place. P501 Dispose of contents/ container in accordance with local regulations.
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2.3. Other hazards

Some hydrogen gas may be released. Hydrogen is flammable and can form explosive mixtures with air. Avoid contact with the following materials: Water Alcohols. Acids. Alkalis. Oxidising materials. This product contains a substance classified as vPvB. This product contains a substance classified as PBT.

SECTION 3: Composition/information on ingredients

3.1. Substances

SILOXANES AND SILICONES, DI-ME, ME HYDROGEN, REACTION PRODUCTS WITH POLYPROPYLENE GLYCOL MONOALLYL ETHER		<=100%
CAS number: 68957-00-6 EC number: 614-852-1		
Classification Not Classified		
POLYPROPYLENE OXIDE MONOALLYL ETHER		>= 2.1 - <= 2.9 %
CAS number: 9042-19-7		
Classification Acute Tox. 4 - H302 Eye Irrit. 2 - H319 Asp. Tox. 1 - H304		
DECAMETHYLCYCLOPENTASILOXANE		>= 1.0 - <= 1.4 %
CAS number: 541-02-6 EC number: 208-764-9		REACH registration number: 01-2119511367-43-XXXX
Classification Not Classified		
OCTAMETHYLCYCLOTETRASILOXANE		>= 0.41 - <= 0.73 %
CAS number: 556-67-2 EC number: 209-136-7		
M factor (Chronic) = 10		
Classification Flam. Liq. 3 - H226 Repr. 2 - H361f Aquatic Chronic 1 - H410		

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DODECAMETHYLCYCLOHEXASILOXANE		>= 0.56 - <= 0.72 %
CAS number: 540-97-6	EC number: 208-762-8	REACH registration number: 01-2119517435-42-XXXX
Classification Not Classified		

The full text for all hazard statements is displayed in Section 16.

Product name DOWSIL 54 ADDITIVE

REACH registration notes Exempt -polymer exempt by Article 2(9)

CAS number 68957-00-6

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	First aid personnel should wear appropriate protective equipment during any rescue. Wear protective clothing as described in Section 8 of this safety data sheet.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Alcohol-resistant foam. Water spray, fog or mist. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Dry chemicals. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	When heated and in case of fire, toxic vapours/gases may be formed. The product increases the risk of fire and may accelerate combustion.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Formaldehyde Oxides of the following substances: Silicon. Carbon.

5.3. Advice for firefighters

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Protective actions during firefighting	No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Do not use water jet as an extinguisher, as this will spread the fire. Contain and collect extinguishing water. Control run-off water by containing and keeping it out of sewers and watercourses. Evacuate area.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Eliminate all sources of ignition.
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6.2. Environmental precautions

Environmental precautions	Toxic to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Some hydrogen gas may be released. Hydrogen is flammable and can form explosive mixtures with air. Avoid contact with water. Alcohols. Moisture. Acids. Alkalis. Avoid the spillage or runoff entering drains, sewers or watercourses.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Avoid contact with water. Protect from moisture. Avoid spilling. Avoid release to the environment. Observe good chemical hygiene practices. Product residues retained in emptied containers can be hazardous.
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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Only store in correctly labelled containers. Store locked up. Do not store near heat sources or expose to high temperatures. This product slowly evolves hydrogen on storage. Containers can burst violently or explode when heated, due to excessive pressure build-up. Store away from the following materials: Water, moisture. Strong oxidising agents.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

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DECAMETHYLCYCLOPENTASILOXANE

Long-term exposure limit (8-hour TWA): SUP 10 ppm

OCTAMETHYLCYCLOTETRASILOXANE

Long-term exposure limit (8-hour TWA): SUP 10 ppm

Ingredient comments Observe any occupational exposure limits for the product or ingredients.

DECAMETHYLCYCLOPENTASILOXANE (CAS: 541-02-6)

DNEL	Workers - Inhalation; Short term systemic effects: 97.3 mg/m ³
	Workers - Inhalation; Short term local effects: 24.2 mg/m ³
	Workers - Inhalation; Long term systemic effects: 97.3 mg/m ³
	Workers - Inhalation; Long term local effects: 24.2 mg/m ³
	Consumer - Inhalation; Short term systemic effects: 17.3 mg/m ³
	Consumer - Inhalation; Short term local effects: 4.3 mg/m ³
	Consumer - Inhalation; Long term systemic effects: 17.3 mg/m ³
	Consumer - Inhalation; Long term local effects: 4.3 mg/m ³
	Consumer - Oral; Short term systemic effects: 5 mg/kg/day
	Consumer - Oral; Long term systemic effects: 5 mg/kg/day
PNEC	- Fresh water; >0.0012 mg/l
	- marine water; >0.00012 mg/l
	- Sediment (Freshwater); 2.4 mg/kg
	- Sediment (Marinewater); 0.24 mg/kg
	- Soil; 1.1 mg/kg
	- STP; >10 mg/l

DODECAMETHYLCYCLOHEXASILOXANE (CAS: 540-97-6)

DNEL	Workers - Inhalation; Long term systemic effects: 11 mg/m ³
	Workers - Inhalation; Short term local effects: 6.1 mg/m ³
	Workers - Inhalation; Long term local effects: 1.22 mg/m ³
	Consumer - Oral; Short term systemic effects: 1.7 mg/kg/day
	Consumer - Inhalation; Short term local effects: 1.5 mg/m ³
	Consumer - Inhalation; Long term systemic effects: 2.7 mg/m ³
	Consumer - Oral; Long term systemic effects: 1.7 mg/kg/day
	Consumer - Inhalation; Long term local effects: 0.3 mg/m ³
PNEC	- Sediment (Freshwater); 2.826 mg/kg
	- Sediment (Marinewater); 0.282 mg/kg
	- Soil; 3.336 mg/kg
	- STP; >1.0 mg/l

OCTAMETHYLCYCLOTETRASILOXANE (CAS: 556-67-2)

DNEL	Workers - Inhalation; Long term systemic effects: 73 mg/m ³
	Workers - Inhalation; Long term local effects: 73 mg/m ³
	Consumer - Inhalation; Long term systemic effects: 13 mg/m ³
	Consumer - Oral; Long term systemic effects: 3.7 mg/kg/day
	Consumer - Inhalation; Long term local effects: 13 mg/m ³

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PNEC

- Fresh water; 0.0015 mg/l
- marine water; 0.00015 mg/l
- Sediment (Freshwater); 3 mg/kg
- Sediment (Marinewater); 0.3 mg/kg
- Soil; 0.54 mg/kg
- STP; 10 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The selected gloves should have a breakthrough time of at least 2 hours. Butyl rubber. Rubber (natural, latex). Neoprene. Nitrile rubber. Polyvinyl chloride (PVC). Thickness: > 0.35 mm To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures

When using do not eat, drink or smoke. Wash after use and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Organic vapour filter. Gas filter, type A EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Amber.
Odour	Ester.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Pour Point	No information available.

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Freezing Point	No information available.
Initial boiling point and range	> 60°C @ 760 mm Hg
Flash point	> 101.1°C Closed cup.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.98
Bulk density	No information available.
Solubility(ies)	No information available.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	170 cSt @ 25°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	No information available.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

The following materials may react with the product: Strong oxidising agents. Some hydrogen gas may be released. Hydrogen is flammable and can form explosive mixtures with air. Avoid contact with water. Alcohols. Acidic. Alkalis. Metals Hazardous decomposition products will be formed at elevated temperatures.

10.4. Conditions to avoid

Conditions to avoid

Avoid excessive heat for prolonged periods of time. Protect from moisture.

10.5. Incompatible materials

Materials to avoid

Strong oxidising agents. Water, moisture.

10.6. Hazardous decomposition products

Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Formaldehyde Oxides of the following substances: Silicon. Carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀)

This product has low toxicity. Not determined. Information given is applicable to the major ingredient. LD₅₀ > 5000 mg/kg, Oral, Rat Estimated value.

ATE oral (mg/kg)

30,714.29

Acute toxicity - dermal

Notes (dermal LD₅₀)

Not determined. Information given is applicable to the major ingredient. LD₅₀ > 2000 mg/kg, Dermal, Rabbit Estimated value.

Acute toxicity - inhalation

Notes (inhalation LC₅₀)

Not determined.

Skin corrosion/irritation

Skin corrosion/irritation

Information given is applicable to the major ingredient. Prolonged skin contact may cause redness and irritation.

Serious eye damage/irritation

Serious eye damage/irritation

Information given is applicable to the major ingredient. May cause temporary eye irritation.

Respiratory sensitisation

Respiratory sensitisation

No information available.

Skin sensitisation

Skin sensitisation

No information available.

Germ cell mutagenicity

Genotoxicity - in vitro

No information available.

Carcinogenicity

Carcinogenicity

No information available.

Reproductive toxicity

Reproductive toxicity - fertility

Contains a substance/a group of substances which may damage fertility.

Specific target organ toxicity - single exposure

STOT - single exposure

No information available.

Specific target organ toxicity - repeated exposure

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STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged skin contact may cause redness and irritation.

Eye contact May cause temporary eye irritation.

Toxicological information on ingredients.

POLYPROPYLENE OXIDE MONOALLYL ETHER

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 860.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 860 mg/kg, Oral, Rat

ATE oral (mg/kg) 860.0

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation. Fully reversible within 21 days.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

DECAMETHYLCYCLOPENTASILOXANE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 24134 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 8.67

Species Rat

Notes (inhalation LC₅₀) LC₅₀ 8.67 mg/l, 4 hours, Dust/Mist Rat

ATE inhalation (dusts/mists mg/l) 8.67

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

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Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Mouse

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Negative.

Carcinogenicity

Carcinogenicity Results from a 2 year repeated vapour inhalation exposure study to rats of decamethylcyclotetrasiloxane (D5) indicate effects (uterine endometrial tumors) in female animals. This finding occurred at the highest exposure dose (160 ppm) only. Studies to date have not demonstrated if this effect occurs through a pathway that is relevant to humans.

Reproductive toxicity

Reproductive toxicity - fertility No evidence of reproductive toxicity in animal studies.

Reproductive toxicity - development No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Skin irritation should not occur when used as recommended.

Eye contact Vapour or spray in the eyes may cause irritation and smarting.

OCTAMETHYLCYCLOTETRASILOXANE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 4800 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2400 mg/kg, Dermal, Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 36 mg/l, 4 hours, Dust/Mist Rat OECD 403

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

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Serious eye damage/irritation	Not irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising. Guinea pig
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties. Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Suspected of damaging fertility. Two-generation study - , Inhalation, Vapour, Rat
Reproductive toxicity - development	Teratogenicity: Based on available data the classification criteria are not met. Developmental toxicity: - : , Inhalation, Vapour, Rabbit
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure. No adverse effects known., Dose level: <= 100 mg/kg, Oral, Rat No adverse effects known., Dose level: <= 1mg/l/6h/d , Inhalation, Vapour, No adverse effects known., Dose level: <= 200 mg/kg, Dermal,
<u>Aspiration hazard</u>	
Aspiration hazard	May be harmful if swallowed and enters airways.
<u>Inhalation</u>	
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system.
<u>Ingestion</u>	
Ingestion	May be harmful if swallowed and enters airways.
<u>Skin contact</u>	
Skin contact	Skin irritation should not occur when used as recommended.
<u>Eye contact</u>	
Eye contact	May cause temporary eye irritation.

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Medical considerations

Octamethylcyclotetrasiloxane administered to rats by inhalation at concentrations of 500 and 700 ppm resulted in statistically significant decreases in the number of pups born and the live litter size in both the first and second generations. Prolonged estrous cycles, and decreased mating and fertility indices were observed following 700 ppm exposure in the second generation only. There were also increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia). Results from a 2 year repeated vapor inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Based on the available information on its potential to cause harm to human health, Health Canada, in a 2008 screening assessment, has concluded that octamethylcyclotetrasiloxane is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health (http://www.ec.gc.ca/substances/ese/eng/challenge/batch2/batch2_556-67-2.cfm). Repeated exposure in rats to D4 resulted in what appears to be protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

DODECAMETHYLCYCLOHEXASILOXANE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not determined.

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation May cause temporary eye irritation.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Guinea pig

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Negative.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

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STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Skin irritation should not occur when used as recommended.

Eye contact May cause temporary eye irritation.

SECTION 12: Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

DECAMETHYLCYCLOPENTASILOXANE

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

OCTAMETHYLCYCLOTETRAILOXANE

Ecotoxicity Very toxic to aquatic life with long lasting effects.

DODECAMETHYLCYCLOHEXASILOXANE

Ecotoxicity The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

DECAMETHYLCYCLOPENTASILOXANE

Toxicity Not toxic at limit of water solubility.

Acute aquatic toxicity

Acute toxicity - fish Not toxic at limit of water solubility.
LC₅₀, 96 hours: >16 µg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates Not toxic at limit of water solubility.
EC₅₀, 48 hours: >2.9 mg/l, Daphnia magna

Acute toxicity - aquatic plants Not toxic at limit of water solubility.
ErC₅₀, 96 hours: > 0.012 mg/l, Pseudokirchneriella subcapitata
Not toxic at limit of water solubility.
NOEC, 96 hours: 0.012 mg/l, Pseudokirchneriella subcapitata

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Acute toxicity - terrestrial NOEC, : ≥ 76 mg/kg, Eisenia Fetida (Earthworm)

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not toxic at limit of water solubility.
 LC₅₀, 14 day: >16 mg/l, Oncorhynchus mykiss (Rainbow trout)
 Not toxic at limit of water solubility.
 NOEC, 45 day: ≥ 0.017 mg/l, Oncorhynchus mykiss (Rainbow trout)
 Not toxic at limit of water solubility.
 NOEC, 90 day: ≥ 0.014 mg/l, Oncorhynchus mykiss (Rainbow trout)

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.015 mg/l, Daphnia magna

OCTAMETHYLCYCLOTETRASILOXANE

Toxicity Very toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish Not toxic at limit of water solubility.
 LC₅₀, 96 hour: > 0.022 mg/l, Oncorhynchus mykiss (Rainbow trout)
 Not toxic at limit of water solubility.
 LC₅₀, 14 days: > 0.0063 mg/l, Cyprinodon variegatus (Sheepshead minnow)

Acute toxicity - aquatic invertebrates Not toxic at limit of water solubility.
 EC₅₀, 96 hours: > 0.0091 mg/l, Mysidopsis bahia (opossum shrimp)
 Not toxic at limit of water solubility.
 EC₅₀, 48 hours: > 0.015 mg/l, Daphnia magna

Acute toxicity - aquatic plants Not toxic at limit of water solubility.
 ErC₅₀, 96 hours: > 0.022 mg/l, Pseudokirchneriella subcapitata
 Not toxic at limit of water solubility.
 EC₁₀, 96 hours: ≥ 0.022 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

NOEC $0.001 < \text{NOEC} \leq 0.01$

Degradability Non-rapidly degradable

M factor (Chronic) 10

Chronic toxicity - fish early life stage Not toxic at limit of water solubility.
 NOEC, 93 days: ≥ 0.0044 mg/l, Oncorhynchus mykiss (Rainbow trout)

Chronic toxicity - aquatic invertebrates Not toxic at limit of water solubility.
 NOEC, 21 days: 0.0079 mg/l, Daphnia magna

DODECAMETHYLCYCLOHEXASILOXANE

Acute aquatic toxicity

Acute toxicity - aquatic plants ErC₅₀, 72 hour: > 0.002 mg/l, Pseudokirchneriella subcapitata
 Not toxic at limit of water solubility.

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 day: 0.0046 mg/l, Daphnia magna
 Not toxic at limit of water solubility.

12.2. Persistence and degradability

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Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

DECAMETHYLCYCLOPENTASILOXANE

Persistence and degradability	The product is expected to be slowly biodegradable.
Biodegradation	- Degradation 0.14%: 28 days (OECD 310)

OCTAMETHYLCYCLOTETRASILOXANE

Persistence and degradability	The product is expected to be slowly biodegradable.
Stability (hydrolysis)	pH7 - Half-life, DT ₅₀ : 3.9 day @ 25°C pH7 - Half-life, DT ₅₀ : 16.7 days @ 12°C pH4 - Degradation, DT ₅₀ : 0.075 days @ 25°C
Biodegradation	- Degradation 3.7%: 28 day OECD 310

DODECAMETHYLCYCLOHEXASILOXANE

Persistence and degradability	The product is not readily biodegradable.
Biodegradation	- Degradation 4.5%: 28 days OECD 301B

12.3. Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	No information available.

Ecological information on ingredients.

POLYPROPYLENE OXIDE MONOALLYL ETHER

Partition coefficient	log Pow: 0.64
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DECAMETHYLCYCLOPENTASILOXANE

Bioaccumulative potential	BCF: > 500, Pimephales promelas (Fat-head Minnow) BCF: 2010, Fish Estimated value.
Partition coefficient	log Pow: 5.2

OCTAMETHYLCYCLOTETRASILOXANE

Bioaccumulative potential	Potentially bioaccumulating. BCF: 12400, Pimephales promelas (Fat-head Minnow)
Partition coefficient	log Pow: 6.49

DODECAMETHYLCYCLOHEXASILOXANE

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Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 8.87

12.4. Mobility in soil

Mobility No information available.

Ecological information on ingredients.

DECAMETHYLCYCLOPENTASILOXANE

Mobility Not considered mobile.

Adsorption/desorption coefficient - Koc: > 5000 @ 20°C Estimated value.

OCTAMETHYLCYCLOTETRAISILOXANE

Mobility Not considered mobile.

Adsorption/desorption coefficient - Koc: 16596 @ 20°C

DODECAMETHYLCYCLOHEXASILOXANE

Mobility Mobile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product contains a substance classified as vPvB. This product contains a substance classified as PBT.

Ecological information on ingredients.

DECAMETHYLCYCLOPENTASILOXANE

Results of PBT and vPvB assessment Decamethylcyclopentasiloxane (D5) meets the current REACH Annex XIII criteria for vPvB. However, D5 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D5 is not biomagnifying in aquatic and terrestrial food webs. D5 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D5 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms. Based on an independent scientific panel of experts, the Canadian Minister of the Environment has concluded that "D5 is not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, or that constitute or may constitute a danger to the environment on which life depends".

OCTAMETHYLCYCLOTETRAISILOXANE

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Results of PBT and vPvB assessment

This substance is classified as PBT. This substance is classified as vPvB. Octamethylcyclotetrasiloxane (D4) meets the current REACH Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

DODECAMETHYLCYCLOHEXASILOXANE

Results of PBT and vPvB assessment

Dodecamethyl cyclohexasiloxane (D6) meets the current REACH Annex XIII criteria for vPvB. However, D6 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D6 is not biomagnifying in aquatic and terrestrial food webs. D6 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D6 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

DECAMETHYLCYCLOPENTASILOXANE

Other adverse effects Not determined.

OCTAMETHYLCYCLOTETRAASILOXANE

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

UN No. (ADR/RID)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082
UN No. (ADN)	3082

14.2. UN proper shipping name

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Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS OCTAMETHYLCYCLOTETRASILOXANE)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS OCTAMETHYLCYCLOTETRASILOXANE)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS OCTAMETHYLCYCLOTETRASILOXANE)
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS OCTAMETHYLCYCLOTETRASILOXANE)

14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID classification code	M6
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-A, S-F
ADR transport category	3
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(-)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

Restrictions (Annex XVII Regulation 1907/2006)

CAUTION - Chemical may be subject to REACH RESTRICTIONS - see Annex XVII. This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 70 Entry number: 3

Seveso Directive - Control of major accident hazards E2

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

Canada - DSL/NDL

All the ingredients are listed or exempt.
DSL

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Japan - ENCS

All the ingredients are listed or exempt.
ENCS
ISHL

Korea - KECI

All the ingredients are listed or exempt.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

New Zealand - NZIOC

All the ingredients are listed or exempt.

Taiwan - TCSI

All the ingredients are listed or exempt.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

25/03/2022

Version number

3.000

Supersedes date

08/05/2020

SDS number

52551

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SDS status

Approved.

Hazard statements in full

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H319 Causes serious eye irritation.

H361f Suspected of damaging fertility.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

Signature

Lisa Bland

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.