SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier:

Product name: BLUESIL VACUUM GRS **Product No.:** PRCO90000165

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

Identified uses: Lubricant.
Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:

Elkem Siliconi Italia Srl
via Archimede, 602
I-21042 Caronno Pertusella
ITALY

Telephone: +39 (02) 964 141
Fax: +39 (02) 96450209

E-mail: fds.sil@elkem.com

Supplier:

Elkem Silicones Germany GmbH
Hans-Sachs-Strasse 4a
D-23566 Lübeck
GERMANY

Telephone: +49 (0) 451 6 09 81-27
Fax: +49 (0) 451 6 09 81-11

1.4 Emergency telephone number:

CHEMTREC Switzerland (24h) : +(41)-435082011 / National Poison Centre : 145

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

The product has not been classified as hazardous according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Not classified

2.2 Label Elements:

Supplemental label information:
EUH210: Safety data sheet available on request.

2.3 Other hazards:

Physical Hazards: No specific recommendations.

Health Hazards:
Inhalation: No specific symptoms noted.

Eye contact: No specific symptoms noted.

Skin contact: No specific symptoms noted.

Ingestion: No specific symptoms noted.

Other Health Effects: No other information noted.

Environmental Hazards: No hazard identified as the maximum bioavailable concentration of Octamethylcyclotetrasiloxane (D4) is lower than the classification cut-off value (see Section 12 of this SDS).

Results of PBT and vPvB assessment: This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

Endocrine Disruption - Health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine Disruption - Environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards: No other information noted.

SECTION 3: Composition/information on ingredients

3.2 Mixtures:

General information:
Mixture of Polyorganosiloxanes, fillers.

Hazardous Component(s):

Chemical name	Concentration*	Type	CAS-No.	EC No.	REACH Registration No.	Notes
Dodecamethylcyclohexasiloxane	0,1 - <1%	Impurities	540-97-6	208-762-8	Not relevant.	## vPvB
boric acid	0,3 - <1%	Component	10043-35-3	233-139-2	01-2119486683-25-XXXX	# ##
Decamethylcyclopentasiloxane	0,1 - <1%	Impurities	541-02-6	208-764-9	Not relevant.	## vPvB
octamethylcyclotetrasiloxane	0,01 - <0,079%	Impurities	556-67-2	209-136-7	Not relevant.	## PBT, vPvB

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
# This substance has workplace exposure limit(s).
This substance is listed as SVHC.
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
ED: Endocrine Disruptor

Classification:

Chemical name	Classification	Specific concentration limits / ATE / M-Factor:	Notes
Dodecamethylcyclohexasiloxane	None known.		
boric acid	Repr. 1B H360FD;	Repr. 1B ; H360FD: >= 5,5 %	
Decamethylcyclopentasiloxane	None known.		
octamethylcyclotetrasiloxane	Flam. Liq. 3 H226; Repr. 2 H361f;	Aquatic Toxicity (Acute): 1	

	Aquatic Chronic 1 H410;	Aquatic Toxicity (Chronic): 10	

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information:
No specific first aid measures noted. Get medical attention if symptoms occur.

4.1 Description of first aid measures:

Inhalation:
Under normal conditions of intended use, this material is not expected to be an inhalation hazard. In case of inhalation: Move person into fresh air and keep at rest. Get medical attention if symptoms occur.

Skin contact:
Remove contaminated clothing and shoes. Wash skin with soap and water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.

Eye contact:
In the event of contact with the eyes, rinse thoroughly with clean water for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

Ingestion:
Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Personal Protection for First-aid Responders:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). Refer to sections 5 and 8 for information on emergency procedures and protective equipment.

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

No specific symptoms noted. For further information, please refer to Section 11 of the SDS.

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

Notes to the physician:
No specific recommendations. Show this Safety Data Sheet to the attending physician.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:
Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media:
Avoid water in straight hose stream; will scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Product will burn under fire conditions. Thermal decomposition or combustion may liberate carbon oxides, silicon oxides and other toxic gases or vapors.

5.3 Advice for firefighters:

Special fire fighting procedures:
Use standard firefighting procedures and consider the hazards of other involved materials. Remove undamaged containers from fire area if it is safe to do so. Evacuate to a safe location and contact the emergency services.
Water spray should be used to cool containers.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Special protective equipment for fire-fighters:
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.

6.2 Environmental Precautions:

Collect spillage. Do not discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up:

Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Container must be kept tightly closed. Absorb with sand or other inert absorbent. To clean the floor and all objects contaminated by this material, use an appropriate solvent (see § 9). Flush area with plenty of water. Incinerate in suitable combustion chamber.

6.4 Reference to other sections:

Caution: Contaminated surfaces may be slippery. For waste disposal, see Section 13 of the SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Precautions:
Handle in accordance with good industrial hygiene and safety practices. No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the SDS for additional personal protection advice when handling this product. Take care to prevent spills, waste and minimize release to the environment. In case of spills, beware of slippery floors and surfaces.

Hygiene measures:
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for safe storage, including any incompatibilities:

Store in accordance with local/regional/national regulations. Avoid discharge into drains, water courses or onto the ground. Store in a dry place. Keep in properly labelled containers. Keep above the chemical's freezing point. Protect against physical damage and/or friction. Store away from incompatible materials. For further information, refer to section 10: "Stability and Reactivity".

Packaging frequently used at our sites:
Plastic lined steel drum. Suitable plastic material.

7.3 Specific end use(s):

No specific recommendations. See the technical data sheet on this product for further information.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters:

Occupational Exposure Limits:

boric acid

Type	Exposure Limit Values	Source	Date	Remarks
STEL	- 1,8 mg/m3	SUVA	01 2018	Inhalable fraction.
TWA	- 1,8 mg/m3	SUVA	01 2018	Inhalable fraction.

octamethylcyclotetrasiloxane

Type	Exposure Limit Values		Source	Date	Remarks
TWA	10 ppm	120 mg/m3	WEEL		

Monitoring methods:
Ensure workers' exposure monitoring in accordance with national and European regulations in force, in particular Directives 98/24/EC and 2004/37/EC.

8.2 Exposure controls:

Appropriate Engineering Controls:
Use engineering controls to reduce air contamination to permissible exposure level. The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Engineering controls are always preferable to personal protective equipment. Control measures to consider: Provide adequate ventilation. In case of inadequate ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment:
Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. Personal protective equipment should be chosen according to applicable standards, adapted to the conditions of use of the product and in discussion with the supplier of the personal protective equipment.

Eye/face protection:
Safety glasses with side shields.

Hand Protection:
This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes. In case this product will be mixed with other substances, you need to contact a supplier of CE approved protective gloves in order to determine the appropriate gloves.

Prolonged or repeated contact:
Material: Nitrile.
Glove thickness: 1,25 mm
Guideline: EN374-3
Additional Information: Gloves commonly used in Elkem's facilities.

Short contact:
Material: Nitrile / Neoprene
Glove thickness: 0,198 mm
Guideline: EN374-3
Additional Information: Gloves commonly used in Elkem's labs.

Skin and Body Protection:
Wear appropriate clothing to prevent any possibility of skin contact. Isolate contaminated clothing and wash before reuse. In case of splashes: Wear apron or special protective clothing.

Respiratory Protection:
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use the following CE approved air-purifying respirator: Breathing apparatus with combined filter type ABEK. Wear respiratory protection with combination filter (dust and gas filter) during operations leading to the formation of dust/aerosols.

Environmental Controls:
See sections 7 and 13 of the Safety Data Sheet.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	
Physical state:	Solid
Form:	Viscous paste
Color:	Whitish
Odor:	Odorless
pH:	Not applicable.
Melting point/freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	270 °C / 518 °F (Closed Cup)
Flammability:	No data available.
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Relative vapor density:	No data available.
Evaporation Rate:	No data available.
Density:	Approximate 1,01 kg/dm3 (20 °C)
Solubility(ies):	
Solubility in Water:	Practically Insoluble
Solubility (other):	Acetone: Practically Insoluble Alcohol: Practically Insoluble Diethylether: Dispersible Aliphatic hydrocarbons: Dispersible Aromatic hydrocarbons: Dispersible Chlorinated solvents: Dispersible
Partition coefficient (n-octanol/water):	No data available.
Self Ignition Temperature:	> 400 °C
Decomposition Temperature:	No data available.
Kinematic viscosity:	No data available.
Particle characteristics:	
Particle Size:	Not applicable.

9.2 Other information:

Oxidizing properties:	According to the data on the components Not considered as oxidizing. (evaluation by structure-activity relationship)

SECTION 10: Stability and reactivity

10.1 Reactivity:

No other information noted.

10.2 Chemical Stability:

Stable

10.3 Possibility of hazardous reactions:

No data available.

10.4 Conditions to avoid:

No other information noted.

10.5 Incompatible Materials:

Strong oxidizing agents.

10.6 Hazardous Decomposition Products:

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11: Toxicological information

Information on likely routes of exposure:

Inhalation: No data available.

Ingestion: No data available.

Skin contact: No data available.

Eye contact: No data available.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity:

Oral:
Not classified for acute toxicity based on available data.

Dermal:
Not classified for acute toxicity based on available data.

Inhalation:
Not classified for acute toxicity based on available data.

Repeated dose toxicity:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
NOAEL: 1 000 mg/kg ; (Rat ; Female, Male ; Oral) ; Method: OECD 422 ; Subacute exposure
NOAEL: 0,0182 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: OECD 413 ; Subchronic exposure.

BORIC ACID (*10043-35-3*):
NOAEL: 17,5 mg/kg ; LOAEL: 58,5 mg/kg ; (Rat ; Female, Male ; Feed (Oral)) ; Chronic exposure.
NOAEL: 0,47 mg/l ; (Rat ; Female, Male ; Inhalation - dust and mist) ; Subchronic exposure.
NOAEL: >= 0,057 mg/l ; (Dog ; female ; Inhalation - dust and mist) ; Subchronic exposure.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
NOAEL: 1 000 mg/kg ; (Rat ; Female, Male ; Oral) ; Method: OECD 408 ; Subchronic exposure.
NOAEL: 2,42 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: OECD 453 ; Chronic exposure.
NOAEL: 1 600 mg/kg ; (Rat ; Female, Male ; Dermal) ; Method: OECD 410 ; Subacute exposure

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
NOAEL: 1,82 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: Similar to OECD 453 ; Chronic exposure.
NOAEL: 960 mg/kg ; (Rabbit ; Female, Male ; Dermal) ; Method: Similar to OECD 410 ; Subacute exposure

Skin Corrosion/Irritation:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Not irritating (Rabbit) ; Method: OECD 404

BORIC ACID (*10043-35-3*):
Not irritating (Rabbit ; 24 h) ; Method: According to a standardised method.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Not irritating (Rabbit) ; Method: OECD 404

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Not irritating (Rabbit) ; Method: Similar to OECD 404

Serious Eye Damage/Eye Irritation:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Not irritating (Rabbit) ; Method: OECD 405

BORIC ACID (*10043-35-3*):
Slightly irritating. (Rabbit ; 24 h) ; Method: OECD 405

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Not irritating (Rabbit) ; Method: OECD 405

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Not irritating (Rabbit) ; Method: OECD 405

Respiratory or Skin Sensitization:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Skin sensitization: Not a skin sensitizer. (Guinea Pig) ; Method: OECD 406

BORIC ACID (*10043-35-3*):
Skin sensitization: Not a skin sensitizer. (Guinea Pig) ; Method: OECD 406

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Skin sensitization: Not a skin sensitizer. (Mouse) ; Method: OECD 429

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Skin sensitization: Not a skin sensitizer. (Guinea Pig) ; Method: OECD 406

Germ Cell Mutagenicity:

In vitro: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium and Escherichia coli ; with and without metabolic activation) ; Method: OECD 471
In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: OECD 476

BORIC ACID (*10043-35-3*):
Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium ; with and without metabolic activation) ; Method: OECD 471
In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: OECD 476
In vitro Sister Chromatid Exchange (SCE) assay in mammalian cells: No mutagenic effect. (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: According to a standardised method.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Bacterial reverse mutation test: No mutagenic components identified. (Salmonella typhimurium and Escherichia coli ; with and without metabolic activation) ; Method: OECD 471
In vitro gene mutations test on mammalian cells: No mutagenic components identified. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: OECD 476
Chromosomal aberration: No clastogenic effect. (Chinese hamster lung cells ; with and without metabolic activation) ; Method: OECD 473

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium ; with and without metabolic activation) ; Method: OECD 471
In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: Similar to OECD 476
In vitro mammalian chromosomal aberration test: No clastogenic effect. (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: Similar to OECD 473

In vivo: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Mammalian erythrocyte micronucleus test: No mutagenic effect. (Mouse ; Intraperitoneal) ; Method: OECD 474

BORIC ACID (*10043-35-3*):
Mammalian erythrocyte micronucleus test: No mutagenic effect. (Mouse ; Gavage (Oral)) ; Method: OECD 474

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Mammalian erythrocyte micronucleus test: negative (Rat ; Female, Male ; Inhalation) ; Method: OECD 474
Unscheduled DNA Synthesis (UDS) Test with mammalian liver cells in vivo: negative (Rat ; Female, Male ; Inhalation) ; Method: OECD 486

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Mammalian bone marrow chromosomal aberration test: negative (Rat ; Female, Male ; Inhalation) ; Method: Similar to OECD 475
Rodent dominant Lethal test: negative (Rat ; Female, Male ; Gavage (Oral)) ; Method: Similar to OECD 478

Carcinogenicity:

Based on our knowledge of the composition information:
BORIC ACID (*10043-35-3*):
NOEL: > 5 000 ppm (Mouse ; Feed (Oral)) ; Method: OECD 451

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Not classified
NOAEC: >= 2,42 mg/l (Rat ; Female, Male ; Inhalation - vapor) ; Method: Similar to OECD 453 ; Chronic exposure. No carcinogenic effects relevant to humans.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Not classified
No effects expected. NOAEC: >= 8,492 mg/l (Rat ; Female, Male ; Inhalation - vapor) ; Method: Similar to OECD 453 ; Chronic exposure.

Reproductive toxicity:

Fertility: Based on our knowledge of the composition information:

DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Not classified
Reproduction/developmental toxicity screening test: NOAEL (parent): >= 1 000 mg/kg ; NOAEL (F1): 1 000 mg/kg ; NOAEL (F2): None. (Rat ; Female, Male ; Gavage (Oral)) ; Method: OECD 422 ; The product is not considered to affect fertility.

BORIC ACID (*10043-35-3*):
Fertility study 3 generations: NOAEL (parent): 17,5 mg/kg ; NOAEL (F1): 17,5 mg/kg ; NOAEL (F2): 17,5 mg/kg (Rat ; Feed (Oral)) ; Specific concentration limit: >=5.5%

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Not classified
Fertility study 2 generations: NOAEL (parent): > 2,496 mg/l ; NOAEL (F1): 2,496 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation - vapor) ; Method: OECD 416

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Suspected of damaging fertility.
Fertility study 2 generations: NOAEL (parent): 3,64 mg/l ; NOAEL (F1): 3,64 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation) ; Method: Similar to OECD 416 ; Effects on fertility

Teratogenicity: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Not classified
NOAEL (terato): >= 1 000 mg/kg ; NOAEL (mater): >= 1 000 mg/kg (Rabbit ; Gavage (Oral)) ; Method: OECD 414
NOAEL (terato): >= 1 000 mg/kg ; NOAEL (mater): >= 1 000 mg/kg (Rat ; Gavage (Oral)) ; Method: OECD 414

BORIC ACID (*10043-35-3*):
NOAEL (terato): 9,6 mg/kg ; NOAEL (mater): 13,3 mg/kg (Rat ; Feed (Oral)) ; Method: OECD 414

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
NOAEL (terato): >= 8,492 mg/l ; NOAEL (mater): 3,64 mg/l (Rat ; Inhalation - vapor) ; Method: Similar to OECD 414 ; The product is not considered to be toxic for development.
NOAEL (terato): >= 6,066 mg/l ; NOAEL (mater): 3,64 mg/l (Rabbit ; Inhalation - vapor) ; Method: Similar to OECD 414 ; The product is not considered to be toxic for development.

Specific Target Organ Toxicity - Single Exposure:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Based on available data, the classification criteria are not met.

BORIC ACID (*10043-35-3*):
Based on available data, the classification criteria are not met.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Based on available data, the classification criteria are not met.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Based on available data, the classification criteria are not met.

BORIC ACID (*10043-35-3*):
Based on available data, the classification criteria are not met.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Based on available data, the classification criteria are not met.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Based on available data, the classification criteria are not met.

Aspiration Hazard:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Based on available data, the classification criteria are not met.

BORIC ACID (*10043-35-3*):
Based on available data, the classification criteria are not met.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Based on available data, the classification criteria are not met.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Based on available data, the classification criteria are not met.

11.2 Information on other hazards:

Endocrine disrupting properties:

No data available.

Other information:

None known.

SECTION 12: Ecological information

General information:
The maximum concentration of Octamethylcyclotetrasiloxane (D4) leachable from the product is below the established no-effect threshold (<0.0079 mg/l) for aquatic organisms.

12.1 Toxicity:

Acute toxicity:

Fish: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
LC 50 (Oncorhynchus mykiss; 96 h ; Flow through) : > 0,016 mg/l ; Method: OECD 204 ; No toxicity at the limit of solubility

BORIC ACID (*10043-35-3*):
LC 50 (Pimephales promelas; 96 h ; Static) : 79,7 mg/l ; Method: According to a standardised method. ; Results obtained on a similar product.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
LC 50 (Oncorhynchus mykiss; 96 h ; Flow through) : > 0,016 mg/l ; Method: OECD 204
NOEC (Oncorhynchus mykiss; 96 h ; Flow through) : >= 0,016 mg/l ; Method: OECD 204

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
LC 50 (Oncorhynchus mykiss; 96 h ; Flow through) : > 0,022 mg/l ; Method: According to a standardised method.

Aquatic Invertebrates: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
EC 50 (Water flea (Daphnia magna); 48 h ; Flow through) : > 0,0029 mg/l ; Method: OECD 202 ; No toxicity at the limit of solubility

BORIC ACID (*10043-35-3*):
LC 50 (Water flea (Ceriodaphnia dubia); 48 h ; Static) : 91 mg/l ; Method: OECD 202

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
EC 50 (Water flea (Daphnia magna); 48 h ; Flow through) : > 0,0029 mg/l ; Method: OECD 202
NOEC (Water flea (Daphnia magna); 48 h ; Flow through) : >= 0,0029 mg/l ; Method: OECD 202

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
EC 50 (Water flea (Daphnia magna); 48 h ; Flow through) : > 0,015 mg/l ; Method: According to a standardised method.

Aquatic plants: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
NOEC (growth rate) (Algae (Pseudokirchneriella subcapitata); 72 h ; Static) : >= 0,002 mg/l ; Method: OECD 201 ; No toxicity at the limit of solubility
ErC50 (Algae (Pseudokirchneriella subcapitata); 72 h ; Static) : > 0,002 mg/l ; Method: OECD 201 ; No toxicity at the limit of solubility

BORIC ACID (*10043-35-3*):
EC 50 (Algae (Pseudokirchneriella subcapitata); 72 h ; Static) : 52,4 mg/l ; Method: OECD 201
NOEC (growth rate) (Algae (Pseudokirchneriella subcapitata); 72 h ; Static) : 17,5 mg/l ; Method: OECD 201

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
EC 50 (Algae (Pseudokirchneriella subcapitata); 96 h ; Static) : > 0,012 mg/l ; Method: OECD 201
NOEC (Algae (Pseudokirchneriella subcapitata); 96 h ; Static) : >= 0,012 mg/l ; Method: OECD 201

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
ErC50 (Algae (Pseudokirchneriella subcapitata); 96 h) : > 0,022 mg/l ; Method: According to a standardised method.
ErC10 (Algae (Pseudokirchneriella subcapitata); 96 h) : >= 0,022 mg/l ; Method: According to a standardised method.

Toxicity to microorganisms: Based on our knowledge of the composition information:
OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
EC 50 (3 h) : > 10 000 mg/l

Chronic Toxicity:

Fish: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
NOEC (Oncorhynchus mykiss; 90 d ; Flow through) : >= 0,014 mg/l ; Method: OECD 210 ; No toxicity at the limit of solubility

BORIC ACID (*10043-35-3*):
NOEC (Zebra danio (Danio rerio); 34 d ; semi-static) : 6,4 mg/l ; Method: OECD 210

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
NOEC (Oncorhynchus mykiss; 90 d ; Flow through) : >= 0,014 mg/l ; Method: OECD 210

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
NOEC (Oncorhynchus mykiss; 93 d ; Flow through) : >= 0,0044 mg/l ; Method: According to a standardised method.

Aquatic Invertebrates: Based on our knowledge of the composition information:

DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
NOEC (Water flea (Daphnia magna); 21 d ; semi-static) : >= 0,0046 mg/l ; Method: OECD 211 ; No toxicity at the limit of solubility

BORIC ACID (*10043-35-3*):
NOEC (Water flea (Daphnia magna); 21 d ; semi-static) : 10,8 mg/l ; Method: OECD 211
EC 10 (Water flea (Daphnia magna); 21 d ; semi-static) : 17,7 mg/l ; Method: OECD 211

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
NOEC (Water flea (Daphnia magna); 21 d ; semi-static) : >= 0,015 mg/l ; Method: OECD 211

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
NOEC (Water flea (Daphnia magna); 21 d) : 0,0079 mg/l ; Method: EPA OTS 797.1330 (Daphnid Chronic Toxicity Test) ; CLH report / RAC Opinion
NOEC (Water flea (Daphnia magna); 21 d ; Flow through) : >= 0,015 mg/l ; Method: According to a standardised method.

12.2 Persistence and Degradability:

Biodegradation: Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
4,5 % (activated sludge, domestic, non-adapted ; 28 d) ; Method: OECD 310 ; The product is not readily biodegradable.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
0,14 % (28 d) ; The product is not readily biodegradable.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
3,7 % (activated sludge and sewage, soil ; 28 d) ; Method: OECD 310 ; The product is not considered to be readily biodegradable.

BOD/COD Ratio: No data available.

12.3 Bioaccumulative potential:

Bioconcentration Factor (BCF): Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Bioconcentration Factor (BCF): 2 860 (Fathead Minnow ; 49 d) ; Method: OECD 305 ; Has the potential to bioaccumulate.

BORIC ACID (*10043-35-3*):
Bioconcentration Factor (BCF): < 0,1

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Bioconcentration Factor (BCF): 16 200 (Pimephales promelas) ; Method: OECD 305 ; The product is not bioaccumulating.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Bioconcentration Factor (BCF): 14 900 (Fathead Minnow) ; Method: OECD 305 ; Not bioaccumulable based on the depuration rate constant

Partition coefficient (n-octanol/water): Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Log Kow: 8,87 (23 °C)

BORIC ACID (*10043-35-3*):
Log Kow: -1,09 (22 °C)

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Log Kow: 8,02 (25,3 °C) ; Method: OECD 123

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Log Kow: 6,49 (25 °C) ; Method: OECD 123

12.4 Mobility in soil:

No data available.

12.5 Results of PBT and vPvB assessment:

Based on our knowledge of the composition information:
DODECAMETHYLCYCLOHEXASILOXANE (*540-97-6*):
Meets vPvB criteria (REACH (1907/2006) Ax XIII)

BORIC ACID (*10043-35-3*):
Not applicable.

DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Meets vPvB criteria (REACH (1907/2006) Ax XIII)

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Meets PBT (persistent/bioaccumulative/toxic) criteria. (REACH (1907/2006) Ax XIII)
Meets vPvB criteria (REACH (1907/2006) Ax XIII)

12.6 Endocrine disrupting properties:

No data available.

12.7 Other adverse effects:

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

The user's attention is drawn to the possible existence of local regulations regarding disposal.

Disposal methods:
Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Incinerate.

Contaminated Packaging:
Contaminated packages should be as empty as possible. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Recycle following cleaning or dispose of at an authorised site.

SECTION 14: Transport information

ADR

Not regulated.

ADN

Not regulated.

RID

Not regulated.

IMDG / IMO

Not regulated.

IATA

Not regulated.

SECTION 15: Regulatory information

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

EU Regulations:

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: None present or none present in regulated quantities.

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex II, New Substances: None present or none present in regulated quantities.

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended: None present or none present in regulated quantities.

EU. Directive 2010/75/EU on Industrial Emissions (IPPC), Annex II, L 334/17:

Chemical name	CAS-No.
boric acid	10043-35-3
octamethylcyclotetrasiloxane	556-67-2

EU. REACH Annex XIV, Substances Subject to Authorization: None present or none present in regulated quantities.

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC):

Chemical name	CAS-No.	Concentration	Additional Information:
Dodecamethylcyclohexasiloxane	540-97-6	0,1 - 1,0%	very Persistent and very Bioaccumulative (vPvB)
boric acid	10043-35-3	0,1 - 1,0%	Toxic for reproduction
Decamethylcyclopentasiloxane	541-02-6	0,1 - 1,0%	very Persistent and very Bioaccumulative (vPvB)

octamethylcyclotetrasiloxane	556-67-2	0,01 - <0,079%	Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB)

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Entry No:	Concentration:
boric acid	10043-35-3	3 30	0,1 - 1,0%
Decamethylcyclopentasiloxane	541-02-6	70	0,1 - 1,0%
octamethylcyclotetrasiloxane	556-67-2	70	0,01 - <0,079%

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
boric acid	10043-35-3	0,1 - 1,0%
octamethylcyclotetrasiloxane	556-67-2	0,01 - <0,079%

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: None present or none present in regulated quantities.

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I: Not applicable.

15.2 Chemical safety assessment:

As this product is not classified as hazardous, a chemical safety assessment is not required. For safe use information, please refer to section 8 of this SDS.

Inventory Status:

Australia AICS:	On or in compliance with the inventory.
Canada DSL Inventory List:	On or in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory.
EINECS, ELINCS or NLP:	On or in compliance with the inventory.

SECTION 16: Other information

Revision Information:

SECTION 3:	Modification:	Composition/information on ingredients

Abbreviations and acronyms:

CLP: Regulation No. 1272/2008.
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
NOAEL - No Observable Adverse Effect Level
LOAEL - Lowest Observable Adverse Effect Level
ED: Endocrine Disruptor
SVHC: Listed on the Candidate List of substances of very high concern (SVHC)

Wording of the H-statements in section 2 and 3:

EUH210	Safety data sheet available on request.
H226	Flammable liquid and vapor.
H360FD	May damage fertility. May damage the unborn child.
H361f	Suspected of damaging fertility.
H410	Very toxic to aquatic life with long lasting effects.

Issue Date: 16.07.2023

Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.