



Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

Jade Graphene Ceramic Pro Coating

version number GHS 2.0.

revision 2020-10-21.

SECTION 1: Identification

- 1.1 Product identifier**
Trade name Jade Graphene Ceramic Pro Coating
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses Vehicle coating
- 1.3 Details of the supplier of the safety data sheet**
B&B Blending, LLC
10963 Leroy Drive
Northglenn
CO 80233
United States
- telephone
1.800.875.6320, 1.303.289.6320
e-mail: info@bbblending.com
website
bbblending.com
e-mail (competent person) Btirrell@bbblending.com
- 1.4 Emergency telephone number**
Emergency information service USA 1.800.535.5053, INTL 1.352.323.3500
24 hour emergency number

SECTION 2: Hazard(s) identification

- 2.1 Classification of the substance or mixture**
Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Cat-egory	Hazard class and category	Hazard state-ment
A.1O	Acute toxicity (oral)	4	Acute Tox. 4	H302
A.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
A.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318
A.7	Reproductive toxicity	2	Repr. 2	H361f
A.10	Aspiration hazard	1	Asp. Tox. 1	H304
B.6	Flammable liquid	3	Flam. Liq. 3	H226

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. The mixture contains a substance that was identified as a PBT (persistent, bioaccumulative and toxic). The mixture contains a substance that was identified as vPvB (very persistent and very bioaccumulative).

- 2.2 Label elements**
Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
Signal word Danger

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Pictograms

GHS02, GHS05,
GHS07, GHS08



Hazard statements

H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 If swallowed: Immediately call a poison center/doctor.
P302+P352 If on skin: Wash with plenty of water.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P362 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous ingredients for labelling

Octamethylcyclotetrasiloxane
Alkyl Polysilicate
Ambient temperature curable refractory resin B
Distillates (petroleum) hydrotreated, light

2.3 Other hazards

Hazards not otherwise classified

Very toxic to aquatic life with long lasting effects (GHS category 1: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

Containing a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.



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SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Notes
ambient temperature curable refractory resin B	CAS No not available	20 - < 40	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Flam. Liq. 2 / H225	
Alkyl Polysilicate	CAS No not available	12 - < 20	Eye Dam. 1 / H318	
octamethylcyclotetrasiloxane	CAS No 556-67-2	3 - < 12	Repr. 2 / H361f Flam. Liq. 3 / H226	PBT vPvB
distillates (petroleum) hydro-treated, light	CAS No 64742-47-8	3 - < 12	Asp. Tox. 1 / H304	
decamethylcyclopentasiloxane	CAS No 541-02-6	3 - < 12	Flam. Liq. 4 / H227	PBT vPvB
methanol	CAS No 67-56-1	0.1 - < 1	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331 STOT SE 1 / H370 Flam. Liq. 2 / H225	

Notes

PBT: The substance was identified as a PBT (persistent, bioaccumulative and toxic)

vPvB: The substance was identified as a vPvB (very persistent and very bioaccumulative)

For full text of abbreviations: see SECTION 16.

This table, if present, includes all GHS classified ingredients present above their cut-off limits, even if the finished product is not classified as hazardous by GHS.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.



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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: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray. BC-powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). collect spillage
sawdust

kieselgur (diatomite)

sand

universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.

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

Recommendations

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

General rule

Do not use for squirting or spraying.

Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	methanol	67-56-1	TLV®	200		250					ACGIH® 2019
US	methyl alcohol	67-56-1	REL	200 (10 h)	260 (10 h)	250	325				NIOSH REL



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Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	methyl alcohol	67-56-1	PEL	200	260						29 CFR 1910.1000
US	methyl alcohol (methanol)	67-56-1	PEL (CA)	200	260	250	325	1,000			Cal/OSHA PEL

Notation

- Ceiling-C Ceiling value is a limit value above which exposure should not occur
- STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
- TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Biological limit values						
Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	methanol	methanol		BEI®	15 mg/l	ACGIH® 2019

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	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 - systemic effects
octamethylcyclotetrasiloxane	556-67-2	DNEL	73 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
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
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
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects



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Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
methanol	67-56-1	DNEL	20 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	20 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
octamethylcyclotetrasiloxane	556-67-2	PNEC	10 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
octamethylcyclotetrasiloxane	556-67-2	PNEC	0.059 mg/kg	pelagic organisms	sediment	short-term (single instance)
octamethylcyclotetrasiloxane	556-67-2	PNEC	1.7 mg/kg	(top) predators	water	short-term (single instance)
octamethylcyclotetrasiloxane	556-67-2	PNEC	0.44 µg/l	aquatic organisms	freshwater	short-term (single instance)
octamethylcyclotetrasiloxane	556-67-2	PNEC	0.044 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	0.59 mg/kg	benthic organisms	sediment	short-term (single instance)
octamethylcyclotetrasiloxane	556-67-2	PNEC	0.16 mg/kg	terrestrial organisms	soil	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	10 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	11 mg/kg	benthic organisms	sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	13 mg/kg	(top) predators	water	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	1.1 mg/kg	pelagic organisms	sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	1.2 µg/l	aquatic organisms	freshwater	short-term (single instance)



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Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
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)
methanol	67-56-1	PNEC	100 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
methanol	67-56-1	PNEC	77 mg/kg	benthic organisms	sediment	short-term (single instance)
methanol	67-56-1	PNEC	7.7 mg/kg	pelagic organisms	sediment	short-term (single instance)
methanol	67-56-1	PNEC	1,540 mg/l	aquatic organisms	water	intermittent release
methanol	67-56-1	PNEC	20.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
methanol	67-56-1	PNEC	2.08 mg/l	aquatic organisms	marine water	short-term (single instance)
methanol	67-56-1	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
methanol	67-56-1	PNEC	77 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
methanol	67-56-1	PNEC	7.7 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
methanol	67-56-1	PNEC	100 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.



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Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	Grey
Odor	Characteristic

Other safety parameters

PH (value)	Not determined
Melting point/freezing point	Not determined
Initial boiling point and boiling range	>65 °C at 1 atm
Flash point	55 °C at 101.3 kPa
Evaporation rate	Not determined
Flammability (solid, gas)	Not relevant Fluid

Explosive limits

Lower explosion limit (LEL)	0.6 vol%
Upper explosion limit (UEL)	4.9 vol%
Vapor pressure	132 Pa at 25 °C
Density	Not determined
Vapor density	This information is not available
Relative density	Information on this property is not available
Solubility(ies)	Not determined

Partition coefficient

- n-octanol/water (log KOW)	This information is not available
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Auto-ignition temperature	262 °C Auto-ignition temperature (liquids and gases)
Viscosity	Not determined
Explosive properties	None
Oxidizing properties	None

9.2 Other information

Temperature class (USA, acc. to NEC 500)	T2B Maximum permissible surface temperature on the equipment: 260 °C
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SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated

Risk of ignition.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if swallowed.

Acute toxicity estimate (ATE)

Oral 1,363 mg/kg



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Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
ambient temperature curable refractory resin B	not available	oral	500 mg/kg
methanol	67-56-1	oral	100 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Suspected of damaging fertility.

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

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
octamethylcyclotetrasiloxane	556-67-2	LC50	>22 µg/l	fish	96 h
octamethylcyclotetrasiloxane	556-67-2	EC50	>1,000 mg/l	aquatic invertebrates	96 h
decamethylcyclopentasiloxane	541-02-6	LC50	>16 µg/l	fish	96 h
decamethylcyclopentasiloxane	541-02-6	EC50	>2.9 µg/l	aquatic invertebrates	48 h
methanol	67-56-1	LC50	15,400 mg/l	fish	96 h
methanol	67-56-1	EC50	12,700 mg/l	fish	96 h
methanol	67-56-1	ErC50	22,000 mg/l	algae	96 h



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Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
octamethylcyclotetrasiloxane	556-67-2	LC50	10 µg/l	fish	14 d
octamethylcyclotetrasiloxane	556-67-2	EC50	>500 mg/l	aquatic invertebrates	24 h
decamethylcyclopentasiloxane	541-02-6	LC50	>16 µg/l	fish	14 d
decamethylcyclopentasiloxane	541-02-6	EC50	>15 µg/l	aquatic invertebrates	21 d

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

The substance fulfills the very bioaccumulative criterion.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

The mixture contains a substance that was identified as a PBT (persistent, bioaccumulative and toxic). The mixture contains a substance that was identified as vPvB (very persistent and very bioaccumulative).

12.6 Other adverse effects

Endocrine disrupting potential

The mixture contains substance(s) with an endocrine disrupting potential.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

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



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SECTION 14: Transport information

14.1 UN number	1993
14.2 UN proper shipping name	Flammable liquid, n.o.s.
Technical name Hazardous ingredients	Ambient temperature curable refractory resin B Octamethylcyclotetrasiloxane
14.3 Transport hazard class(es)	3 Flammable liquids
Class	
14.4 Packing group	III Substance presenting low danger
14.5 Environmental hazards	Hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	Decamethylcyclopentasiloxane
14.6 Special precautions for user	
There is no additional information.	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	
The cargo is not intended to be carried in bulk.	
14.8 Information for each of the UN Model Regulations	
Transport of dangerous goods by road or rail (49 CFR US DOT)	
Index number	1993
Proper shipping name	Flammable liquid, n.o.s.
Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: ambient temperature curable refractory resin B, octamethylcyclotetrasiloxane), 3, III, environmentally hazardous
Class	3
Packing group	III
Danger label(s)	3 Fish and tree
 	
Environmental hazards	Yes Hazardous to the aquatic environment
Special provisions (SP)	B1, B52, IB3, T4, TP1, TP29
ERG No	128
International Maritime Dangerous Goods Code (IMDG)	
UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Class	3
Marine pollutant	Yes Hazardous to the aquatic environment
Packing group	III
Danger label(s)	3 Fish and tree
 	
Special provisions (SP)	223, 274, 955




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revision 2020-10-21.

Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, <u>S-E</u>
Stowage category	A
International Civil Aviation Organization (ICAO-IATA/DGR)	
UN number	1993
Proper shipping name	Flammable liquid, n.o.s.
Class	3
Environmental hazards	Yes Hazardous to the aquatic environment
Packing group	III
Danger label(s)	3
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings			
Name of substance	CAS No	Remarks	Effective date
methanol	67-56-1		1986-12-31

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
methanol	67-56-1		3 4	5000 (2270)

Legend

3 "3" indicates that the source is section 112 of the Clean Air Act

4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

Clean Air Act

none of the ingredients are listed



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Right to Know Hazardous Substance List

Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
ambient temperature curable refractory resin B	not available	refractory resin	
Alkyl Polysilicate	not available	resin	
octamethylcyclotetrasiloxane	556-67-2	solvents	Canada PBiTs CECBP - Priority Chemicals EC PBTs
distillates (petroleum) hydrotreated, light	64742-47-8	solvents	
graphene	7782-42-5	surface modifier	
fluorine modified silicone fluid	115361-68-7	surface modifier	
decamethylcyclopentasiloxane	541-02-6	solvents	Canada PBiTs CECBP - Priority Chemicals EC PBTs
polydimethylsiloxane	63148-62-9	surface modifier	
polytrimethylhydrosilylsiloxane	68988-56-7	surface modifier	
trimethylsiloxysilicate	68988-56-7	resin	
methanol	67-56-1	alcohols	CA TACs NTP OHAT - Repr. or Dev. Toxicants OEHA RELs Prop 65
tetra(trimethylsiloxy)silane	3555-47-3	surface modifier	Canada PBiTs

Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
methanol	67-56-1				1.0 %

Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
methanol	67-56-1		TE F3

Legend

F3 Flammable - Third Degree
TE Teratogenic

Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
METHANOL	67-56-1	E

Legend

E Environmental hazard



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Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
methanol	67-56-1	T, F

Legend

F Flammability (NFPA®)
T Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Proposition 65 List of chemicals				
Name acc. to inventory	CAS No	Wt%	Remarks	Type of the toxicity
methanol	67-56-1	0.174		developmental

VOC content

Regulated Volatile Organic Compounds (VOC-EPA) 0.174 %

Regulated Volatile Organic Compounds (VOC-Cal ARB) 0.174 %

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	3	major injury likely unless prompt action is taken and medical treatment is given
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	3	material that, under emergency conditions, can cause serious or permanent injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		



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National inventories

Country	Inventory	Status
CA	DSL	not all ingredients are listed
CA	NDSL	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
US	TSCA	not all ingredients are listed

Legend

DSL Domestic Substances List (DSL)
NDSL Non-domestic Substances List (NDSL)
REACH Reg. REACH registered substances
TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
3.2		Hazardous ingredients acc. to GHS: change in the listing (table)	yes
11.1		Acute toxicity estimate (ATE): change in the listing (table)	yes
11.1		Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table)	yes
15.1		Cleaning Product Right to Know Act Substance List (CA-RTK): change in the listing (table)	yes
16		List of relevant phrases (code and full text as stated in chapter 2 and 3): change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate



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Abbr.	Descriptions of used abbreviations
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
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
EmS	Emergency Schedule
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
ErC50	= 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
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IATA	International Air Transport Association
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
LHS	Lower hazard substance
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NFPA®	National Fire Protection Association (United States)
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million



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Abbr.	Descriptions of used abbreviations
Repr.	Reproductive toxicity
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture.
Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H227	Combustible liquid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H361f	Suspected of damaging fertility.
H370	Causes damage to organs.

Disclaimer

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