



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

SECTION 1: Identification

- 1.1 Product identifier**
Trade name Jade Ceramic Coating - Marine
- 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 identification

- 2.1 Classification of the substance or mixture**
Classification acc. to GHS

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	3	Flam. Liq. 3	H226
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2A	Eye Irrit. 2A	H319
3.7	Reproductive toxicity	2	Repr. 2	H361f
3.10	Aspiration hazard	1	Asp. Tox. 1	H304

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**

Labeling
Signal word Danger

Jade Ceramic Coating - Marine

version number GHS 1.0.

Date of compilation. 2022-01-19.

Pictograms

GHS02, GHS07,
GHS08



Hazard statements

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
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 and bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
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.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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 or 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.
P308+P313 IF exposed or concerned: Get medical advice/ attention.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 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
 Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine
 Distillates (petroleum), hydrotreated light
 3-Aminopropyltriethoxysilane

2.3 Other hazards

Results of PBT and vPvB assessment

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



Safety Data Sheet

acc. to Hazardous Products Regulations
(HPR)

Jade Ceramic Coating - Marine

version number GHS 1.0.

Date of compilation. 2022-01-19.

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
Distillates (petroleum), hydro-treated light	CAS No 64742-47-8	≥ 10	Asp. Tox. 1 / H304	
octamethylcyclotetrasiloxane	CAS No 556-67-2	≥ 0.1	Flam. Liq. 3 / H226 Repr. 2 / H361f	PBT vPvB
Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine	CAS No 475645-84-2	15 - < 95	Flam. Liq. 2 / H225 Acute Tox. 3 / H301 Skin Corr. 1B / H314 Eye Dam. 1 / H318	
decamethylcyclopentasiloxane	CAS No 541-02-6	≤ 9.872	Flam. Liq. 4 / H227	PBT vPvB
tetra(trimethylsiloxy)silane	CAS No 3555-47-3	≤ 5.18	Flam. Liq. 4 / H227 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
3-aminopropyltriethoxysilane	CAS No 919-30-2	1 - < 4	Flam. Liq. 4 / H227 Acute Tox. 4 / H302 Skin Corr. 1B / H314 Eye Dam. 1 / H318	

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.



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

Following ingestion

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

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

Nitrogen oxides (NO_x). 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.



Safety Data Sheet

acc. to Hazardous Products Regulations
(HPR)

Jade Ceramic Coating - Marine

version number GHS 1.0.

Date of compilation. 2022-01-19.

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.

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



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

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
CA	Jet fuels	64742-47-8	OEL (BC)		200					Hy-Carb, i, vap, H	"BC Regulation"

Notation

- Ceiling-C Ceiling value is a limit value above which exposure should not occur
- H Absorbed through the skin
- HyCarb Calculated as hydrocarbons
- i Inhalable fraction
- 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)
- vap As vapors

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
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)	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	24.2 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
3-aminopropyltriethoxysilane	919-30-2	DNEL	59 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
3-aminopropyltriethoxysilane	919-30-2	DNEL	59 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
3-aminopropyltriethoxysilane	919-30-2	DNEL	8.3 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
3-aminopropyltriethoxysilane	919-30-2	DNEL	8.3 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
octamethylcyclotetrasiloxane	556-67-2	DNEL	73 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
octamethylcyclotetrasiloxane	556-67-2	DNEL	73 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
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



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

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	10 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	11 mg/kg	benthic organisms	sediments	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	sediments	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	1.2 µg/l	aquatic organisms	freshwater	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	0.12 µg/l	aquatic organisms	marine water	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	11 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	1.1 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	2.54 mg/kg	terrestrial organisms	soil	short-term (single instance)
3-aminopropyltriethoxysilane	919-30-2	PNEC	0.33 mg/l	aquatic organisms	freshwater	short-term (single instance)
3-aminopropyltriethoxysilane	919-30-2	PNEC	0.033 mg/l	aquatic organisms	marine water	short-term (single instance)
3-aminopropyltriethoxysilane	919-30-2	PNEC	13 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
3-aminopropyltriethoxysilane	919-30-2	PNEC	1.2 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
3-aminopropyltriethoxysilane	919-30-2	PNEC	0.12 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
3-aminopropyltriethoxysilane	919-30-2	PNEC	0.05 mg/kg	terrestrial organisms	soil	short-term (single instance)
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	sediments	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)



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

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	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	sediments	short-term (single instance)
octamethylcyclotetrasiloxane	556-67-2	PNEC	0.16 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.

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	Not determined
Particle	Not relevant Liquid
Odor	Penetrating - Like solvent



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

Other safety parameters

PH (value)	Not determined
Melting point/freezing point	Not determined
Initial boiling point and boiling range	45 °C
Flash point	58 °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	0.97 g/ml at 25 °C 8.11 lb/gal at 25 °C
Vapor density	This information is not available
Solubility(ies)	Not determined

Partition coefficient

- n-octanol/water (log KOW)	This information is not available
Auto-ignition temperature	262 °C Auto-ignition temperature (liquids and gases)
Viscosity	Not determined
Explosive properties	Not explosive GHS of the United Nations, annex 4
Oxidizing properties	None

9.2 Other information

Temperature class (USA, acc. to NEC 500)	T2B Maximum permissible surface temperature on the equipment: 260 °C
---	--



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

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 GHS

Acute toxicity

Harmful if swallowed.

Acute toxicity estimate (ATE)

Oral 611.4 mg/kg

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine	475645-84-2	oral	300 mg/kg
3-aminopropyltriethoxysilane	919-30-2	oral	500 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

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
Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine	475645-84-2	LC50	57.1 mg/l	zebra fish	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
3-aminopropyltriethoxysilane	919-30-2	LC50	>934 mg/l	fish	96 h
3-aminopropyltriethoxysilane	919-30-2	EC50	331 mg/l	aquatic invertebrates	48 h
3-aminopropyltriethoxysilane	919-30-2	ErC50	>1,000 mg/l	algae	72 h
octamethylcyclotetrasiloxane	556-67-2	LC50	>22 µg/l	fish	96 h
octamethylcyclotetrasiloxane	556-67-2	EC50	>1,000 mg/l	aquatic invertebrates	96 h



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
decamethylcyclopentasiloxane	541-02-6	LC50	>16 µg/l	fish	14 d
decamethylcyclopentasiloxane	541-02-6	EC50	>15 µg/l	aquatic invertebrates	21 d
3-aminopropyltriethoxysilane	919-30-2	EC50	43 mg/l	microorganisms	5.75 h
octamethylcyclotetrasiloxane	556-67-2	LC50	10 µg/l	fish	14 d
octamethylcyclotetrasiloxane	556-67-2	EC50	>500 mg/l	aquatic invertebrates	24 h

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 Endocrine disrupting properties

Information on this property is not available.

12.7 Other adverse effects

Data are not available.

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 the Dangerous Goods Regulations) 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.

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

SECTION 14: Transport information

14.1	UN number	1993
	UN RTDG	UN 1993
	IMDG-Code	UN 1993
	ICAO-TI	UN 1993
14.2	UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
	UN RTDG	FLAMMABLE LIQUID, N.O.S.
	IMDG-Code	FLAMMABLE LIQUID, N.O.S.
	ICAO-TI	Flammable liquid, n.o.s.
	Technical nameHazardous ingredients	Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine 3-Aminopropyltriethoxysilane
14.3	Transport hazard class(es)	
	UN RTDG	3
	IMDG-Code	3
	ICAO-TI	3
14.4	Packing group	III Substance presenting low danger
	UN RTDG	III
	IMDG-Code	III
	ICAO-TI	III
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 informationNational regulationsAdditional information(UN RTDG)	
	UN number	1993
	Class	3
	Environmental hazards	Yes Hazardous to the aquatic environment
	Packing group	III
	Danger label(s)	3 Fish and tree
	 	
	Special provisions (SP)	223, 274 UN RTDG
	Excepted quantities (EQ)	E1 UN RTDG



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

Limited quantities (LQ)	5 L UN RTDG
International Maritime Dangerous Goods Code (IMDG) Additional information	
Marine pollutant	Yes Hazardous to the aquatic environment Decamethylcyclopentasiloxane
Danger label(s)	3 Fish and tree
Special provisions (SP)	223, 274, 955
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) Additional information	
Environmental hazards	Yes Hazardous to the aquatic environment
Danger label(s)	3
<p>SECTION 15: Regulatory information</p>	

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

National regulations (United States)

Toxic Substance Control Act (TSCA) All ingredients are listed

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)

none of the ingredients are listed

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

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

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

Toxic or Hazardous Substance List (MA-TURA)

none of the ingredients are listed

Hazardous Substances List (MN-ERTK)

none of the ingredients are listed

Hazardous Substance List (NJ-RTK)



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

none of the ingredients are listed

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

none of the ingredients are listed

Hazardous Substance List (RI-RTK)

none of the ingredients are listed

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

none of the ingredients are listed

VOC content

Regulated Volatile Organic Compounds (VOC-EPA) 0 %

Regulated Volatile Organic Compounds (VOC-Cal ARB) 0 %

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	2	temporary or minor injury may occur
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	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National regulations(Canada)

Domestic Substances List (DSL)/Non-domestic Substances List (NDSL)

all ingredients are listed

National inventories



Safety Data Sheet

acc. to Hazardous Products Regulations
(HPR)

Jade Ceramic Coating - Marine

version number GHS 1.0.

Date of compilation. 2022-01-19.

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	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

Indication of changes (revised safety data sheet)

Alignment to regulation. Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

Restructuring: section 9, section 14

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
"BC Regulation"	OHS Regulation: Section 5.48 (British Columbia)
Acute Tox.	Acute toxicity
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
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
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



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

Abbr.	Descriptions of used abbreviations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	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
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
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
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Hazardous Products Regulations (HPR).

UN Recommendations on the Transport of Dangerous Good. 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 section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H227	Combustible liquid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.



Safety Data Sheet
acc. to Hazardous Products Regulations
(HPR)

**Jade Ceramic Coating -
Marine**

version number GHS 1.0.

Date of compilation. 2022-01-19.

Code	Text
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.

Disclaimer

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