

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

SECTION 1: Identification

1.1 Product identifier

Trade name

Graphene Matrix MAX - Ceramic Coating

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

Relevant identified uses

Polymeric automobile paint sealant
Vehicle coating

Uses advised against

Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

1.3 Details of the supplier of the safety data sheet

Ethos Handcrafted Car Care
2332 La Mirada Drive, Suite 400
Vista, CA. 92081
1-800-535-5053

<http://ethoscarcare.com>
support@ethoscarcare.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	Category	Hazard class and category	Hazard statement
A.10	acute toxicity (oral)	4	Acute Tox. 4	H302
A.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
A.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
B.6	flammable liquid	4	Flam. Liq. 4	H227

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. 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

- Pictograms

GHS05, GHS07



- Hazard statements

H227

Combustible liquid.

H302

Harmful if swallowed.

H314

Causes severe skin burns and eye damage.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

- Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P321	Specific treatment (see on this label).
P363	Wash contaminated clothing 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

Alkyl Polysilicates, Cyclosilazanes, di-Me, Me Hydrogen, polymers with di-Me, Me hydrogen silazanes, and 2,4-TDI, methanol

2.3 Other hazards

This material is combustible, but will not ignite readily.

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 $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
Cyclosilazanes, di-Me, Me Hydrogen, polymers with di-Me, Me hydrogen silazanes, and 2,4-TDI	CAS No trade secret	20 - < 40	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Flam. Liq. 2 / H225
Alkyl Polysilicates	CAS No Trade Secret	12 - < 20	Acute Tox. 4 / H302 Skin Corr. 1B / H314
distillates (petroleum) hydrotreated, light	CAS No 64742-47-8	3 - < 12	Asp. Tox. 1 / H304
decamethylcyclopentasiloxane	CAS No 541-02-6	3 - < 12	Flam. Liq. 4 / H227
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

Hazardous ingredients, Consideration of other advice

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.

Exact percentage of ingredients is withheld as a trade secret.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

For full text of abbreviations: see SECTION 16.

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. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

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.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

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. Ventilate affected area.

6.4 Reference to other sections

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

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.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

- 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)											
Coun- try	Name of agent	CAS No	Iden- tifier	TWA [ppm]	TWA [mg/ m ³]	STEL [ppm]	STEL [mg/ m ³]	Ceiling-C [ppm]	Ceiling-C [mg/ m ³]	Nota- tion	Sourc- e
US	methanol	67-56-1	TLV®	200		250				H	AC- GIH® 2019
US	methyl alcohol	67-56-1	REL	200 (10 h)	260 (10 h)	250	325				NIOS H REL
US	methyl alcohol	67-56-1	PEL	200	260						29 CFR 1910.1 000
US	methyl alcohol (methanol)	67-56-1	PEL (CA)	200	260	250	325	1,000			Cal/ OSHA PEL
US	graphite	7782-42- 5	PEL (CA)		2.5					natur- al, r	Cal/ OSHA PEL
US	graphite	7782-42- 5	REL		2.5 (10 h)					natur- al, r	NIOS H REL
US	graphite	7782-42- 5	PEL	530						partm l, r, natur- al	29 CFR 1910.1 000
US	graphite	7782-42- 5	TLV®		2					r, ex- Grap hFib	AC- GIH® 2019
US	graphite	7782-42- 5	REL							syn- thetic, appx- D	NIOS H REL
US	graphite	7782-42- 5	PEL (CA)		10					syn- thetic, dust	Cal/ OSHA PEL
US	graphite	7782-42- 5	PEL		15					syn- thetic, i, dust	29 CFR 1910.1 000
US	graphite	7782-42- 5	PEL (CA)		5					syn- thetic, r	Cal/ OSHA PEL

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

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	graphite	7782-42-5	PEL		5					synthetic, r, dust	29 CFR 1910.1000

Notation

appx-D	see Appendix D - Substances with No Established RELs
Ceiling-C	ceiling value is a limit value above which exposure should not occur
dust	as dust
exGraphFib	except graphite fibers
H	absorbed through the skin
i	inhalable fraction
natural	natural
partml	particles/ml
r	respirable 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)
synthetic	synthetic
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	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Alkyl Polysilicates	Trade Secret	DNEL	14 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Alkyl Polysilicates	Trade Secret	DNEL	2 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
decamethylcyclopentasiloxane	541-02-6	DNEL	97 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
decamethylcyclopentasiloxane	541-02-6	DNEL	24 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
decamethylcyclopentasiloxane	541-02-6	DNEL	97 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
decamethylcyclopentasiloxane	541-02-6	DNEL	24 mg/m ³	human, inhalatory	worker (industry)	chronic - 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
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

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

Relevant DNELs of components of the mixture

Name of sub-stance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
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 sub-stance	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	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)
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	2.5 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	21 mg/l	aquatic organisms	freshwater	short-term (single instance)
methanol	67-56-1	PNEC	2.1 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)

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
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.

- Other protection measures

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

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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	colorless - black
Particle	not relevant (liquid)
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	61 °C at 101 kPa closed cup
Evaporation rate	Not determined

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	
- Lower explosion limit (LEL)	0.6 vol%
- Upper explosion limit (UEL)	4.9 vol%
Vapor pressure	33 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
Auto-ignition temperature	262 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
Temperature class (USA, acc. to NEC 500)	T2B (maximum permissible surface temperature on the equipment: 260 °C)

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

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

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 914 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, and 2,4-TDI	trade secret	oral	500 mg/kg
Alkyl Polysilicates	Trade Secret	oral	500 mg/kg
methanol	67-56-1	oral	100 mg/kg
methanol	67-56-1	inhalation: gas	700 ppmV/4h
methanol	67-56-1	inhalation: dust/mist	0.5 mg/l/4h

Skin corrosion/irritation

Causes severe skin burns and eye damage.

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

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

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
Alkyl Polysilicates	Trade Secret	LC50	>934 mg/l	fish	96 h
Alkyl Polysilicates	Trade Secret	EC50	331 mg/l	aquatic invertebrates	48 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

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Alkyl Polysilicates	Trade Secret	EC50	43 mg/l	microorganisms	5.75 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 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

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.

SECTION 14: Transport information

14.1 UN number

DOT UN 1760

IMDG-Code UN 1760

ICAO-TI UN 1760

14.2 UN proper shipping name

DOT Corrosive liquid, n.o.s.

IMDG-Code CORROSIVE LIQUID, N.O.S.

ICAO-TI Corrosive liquid, n.o.s.

Technical name (hazardous ingredients) Alkyl Polysilicates, Cyclosilazanes, di-Me, Me Hydrogen, polymers with di-Me, Me hydrogen silazanes, and 2,4-TDI

14.3 Transport hazard class(es)

DOT 8

IMDG-Code 8

ICAO-TI 8

14.4 Packing group

DOT II

IMDG-Code II

ICAO-TI II

14.5 Environmental hazards

hazardous to the aquatic environment

Environmentally hazardous substance (aquatic environment) Alkyl Polysilicates

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.

Information for each of the UN Model Regulations

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration

UN1760, Corrosive liquid, n.o.s., (contains: Alkyl Polysilicates, Cyclosilazanes, di-Me, Me Hydrogen, polymers with di-Me, Me hydrogen silazanes, and 2,4-TDI), 8, II, environmentally hazardous

Reportable quantity (RQ)

2,873,563 lbs (1,304,598 kg) (methanol)

Danger label(s)

8, fish and tree



Environmental hazards

yes (hazardous to the aquatic environment)

Special provisions (SP)

B2, IB2, T11, TP2, TP27

ERG No

154

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant

yes (hazardous to the aquatic environment) (Alkyl Polysilicates)

Danger label(s)

8, fish and tree



Special provisions (SP)

274

Excepted quantities (EQ)

E2

Limited quantities (LQ)

1 L

EmS

F-A, S-B

Stowage category

B

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards

yes (hazardous to the aquatic environment)

Danger label(s)

8



Special provisions (SP)

A3

Excepted quantities (EQ)

E2

Limited quantities (LQ)

0,5 L

SECTION 15: Regulatory information

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

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

- 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

Right to Know Hazardous Substance List

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

Name of substance	CAS No	Functionality	Authoritative Lists
Cyclosilazanes, di-Me, Me Hydrogen, polymers with di-Me, Me hydrogen silazanes, and 2,4-TDI	trade secret	refractory resin	
Alkyl Polysilicates	Trade Secret	resin	
polydimethylsiloxane	63148-62-9	surface modifier	
distillates (petroleum) hydrotreated, light	64742-47-8	solvents	
polytrimethylhydrosilylsiloxane	68988-56-7	surface modifier	
decamethylcyclopentasiloxane	541-02-6	solvents	Canada PBTs CECBP - Priority Chemicals EC PBTs
Graphene	7782-42-5	surface modifier	
trimethylsiloxysilicate	68988-56-7	resin	
tetra(trimethylsiloxy)silane	3555-47-3	surface modifier	Canada PBTs
methanol	67-56-1	alcohols	CA TACs NTP OHAT - Repr. or Dev. Toxicants OEHHa RELs Prop 65

- 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 %

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

- 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

- 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 of substance	Name acc. to inventory	CAS No	Wt%	Remarks	Type of the toxicity
methanol	methanol	67-56-1	0.17		developmental

VOC content

- Regulated Volatile Organic Compounds (VOC-EPA) 0.17 %
- Regulated Volatile Organic Compounds (VOC-Cal ARB) 0.17 %

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
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	-	

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

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		

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	all ingredients are listed
AU	AICS	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
PH	PICCS	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed

Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NDSL	Non-domestic Substances List (NDSL)
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

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

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

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

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
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
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
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
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
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

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

Abbr.	Descriptions of used abbreviations
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)
NLP	No-Longer Polymer
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
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 section 2 and 3)

Code	Text
H225	Highly 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.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Boats & Coats - Graphene Ceramic Coating

Version number: GHS 1.0

Date of compilation: 2022-04-08

Code	Text
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
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.