



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

SECTION 1: Identification

- 1.1 Product identifier**
Trade name Jade Graphene Lite
- 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.3 | Serious eye damage/eye irritation | 2 | Eye Irrit. 2 | H319 |
| 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

Pictograms

GHS02, GHS07,
GHS08





Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

Hazard statements

- H226** Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
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/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.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 If swallowed: Immediately call a poison center/doctor.
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.
P308+P313 If exposed or concerned: Get medical advice/attention.
P331 Do NOT induce vomiting.
P337+P313 If eye irritation persists: Get medical advice/attention.
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
Distillates (petroleum) hydrotreated, light

2.3 Other hazards

Hazards not otherwise classified

Contains . May produce an allergic reaction.
May be harmful if swallowed (GHS category 5: acutely toxic - oral).
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

| Hazardous ingredients acc. to GHS | | | | |
|-----------------------------------|--------------------|-----------|--|-------------|
| Name of substance | Identifier | Wt% | Classification acc. to GHS | Notes |
| octamethylcyclotetrasiloxane | CAS No 556-67-2 | 40 - < 55 | Repr. 2 / H361f Flam. Liq. 3 / H226 | PBT vPvB |
| decamethylcyclopentasiloxane | CAS No 541-02-6 | 12 - < 20 | Flam. Liq. 4 / H227 | PBT vPvB |



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| 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 | 12 - < 20 | Asp. Tox. 1 / H304 | |
| ambient temperature curable refractory resin B | CAS No not available | 3 - < 12 | Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Flam. Liq. 2 / H225 | |
| Alkyl Polysilicate | CAS No not available | 1 - < 3 | 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. 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.

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.



Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

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.

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.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

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

This information is not available.

| 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 |
| 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 |



Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| 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) |
| 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) |

8.2 Exposure controls
Appropriate engineering controls
General ventilation.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

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 | Black |
| Odor | Like ammonia - Fruity |

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 | 54 °C at 101.3 kPa 129 °F 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 |



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| | |
|----------------------------------|---|
| 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 |

9.2 Other information

| | |
|---|---|
| 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.

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.



Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

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

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4. May be harmful if swallowed.

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 |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Contains . May produce an allergic reaction.

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 |



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| Aquatic toxicity (acute) of components of the mixture | | | | | |
|--|----------|----------|-----------|-----------------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| decamethylcyclotetrasiloxane | 541-02-6 | EC50 | >2.9 µg/l | aquatic invertebrates | 48 h |

| 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 |
| decamethylcyclotetrasiloxane | 541-02-6 | LC50 | >16 µg/l | fish | 14 d |
| decamethylcyclotetrasiloxane | 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.



Safety Data Sheet





acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

SECTION 14: Transport information

| | |
|---|---|
| 14.1 UN number | 1993 |
| 14.2 UN proper shipping name | Flammable liquid, n.o.s. |
| Technical name/Hazardous ingredients | Octamethylcyclotetrasiloxane Ambient temperature curable refractory resin B |
| 14.3 Transport hazard class(es) | |
| Class | 3 Flammable liquids |
| 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: octamethylcyclotetrasiloxane, ambient temperature curable refractory resin B), 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 |
| Excepted quantities (EQ) | E1 |




Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| | |
|---|---|
| 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

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 |
|--|---------------|------------------|---|
| octamethylcyclotetrasiloxane | 556-67-2 | solvents | Canada PBiTs CECBP - Priority Chemicals EC PBTs |
| decamethylcyclopentasiloxane | 541-02-6 | solvents | Canada PBiTs CECBP - Priority Chemicals EC PBTs |
| distillates (petroleum) hydrotreated, light | 64742-47-8 | solvents | |
| ambient temperature curable refractory resin B | not available | refractory resin | |
| fluorine modified silicone fluid | 115361-68-7 | surface modifier | |
| Alkyl Polysilicate | not available | resin | |
| trimethylsiloxysilicate | 68988-56-7 | resin | |
| polydimethylsiloxane | 63148-62-9 | surface modifier | |
| polytrimethylhydrosilylsiloxane | 68988-56-7 | surface modifier | |
| graphene | 7782-42-5 | surface modifier | |
| benzyl benzoate | 120-51-4 | fragrance | EU Fragrance Allergens |
| tetra(trimethylsiloxy)silane | 3555-47-3 | surface modifier | Canada PBiTs |



Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| Name of substance | CAS No | Functionality | Authoritative Lists |
|---------------------------------------|------------|---------------|--|
| Terpenes & Terpenoids, grapefruit oil | 68917-32-8 | fragrance | |
| cyclamen aldehyde | 103-95-7 | fragrance | |
| benzyl salicylate | 118-58-1 | fragrance | |
| methanol | 67-56-1 | alcohols | CA TACs NTP OHAT - Repr. or Dev. Toxicants OEHHA RELs Prop 65 |
| lyral | 31906-04-4 | fragrance | EU Fragrance Allergens |
| 2-(4-tert-butylbenzyl)propionaldehyde | 80-54-6 | fragrance | EU Fragrance Allergens |
| benzyl alcohol | 100-51-6 | fragrance | |
| Allyl hexanoate | 123-68-2 | fragrance | |
| allyl cyclohexylpropionate | 2705-87-5 | fragrance | |
| ethyl vanillin | 121-32-4 | fragrance | |
| ethyl maltol | 4940-11-8 | fragrance | |
| 7-hydroxycitronellal | 107-75-5 | fragrance | EU Fragrance Allergens |
| Phenethyl alcohol | 60-12-8 | fragrance | |

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 | 0.02178 | | developmental |

VOC content

Regulated Volatile Organic Compounds (VOC-EPA) 0.1119 %

Regulated Volatile Organic Compounds (VOC-Cal ARB) 0.1169 %

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).



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| 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 | 0 | material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material |
| 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 | 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 |
|---------|---------------------------|--|-----------------|
| 15.1 | | Cleaning Product Right to Know Act Substance List (CA-RTK): change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|---------------|--|
| 49 CFR US DOT | 49 CFR U.S. Department of Transportation |
| 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) |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| DOT | Department of Transportation (USA) |



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

| Abbr. | Descriptions of used abbreviations |
|----------------|--|
| 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 |
| 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 |
| 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 |
| 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 |
| OSHA | Occupational Safety and Health Administration (United States) |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| 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 |
| 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).



Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

Jade Graphene Lite

version number GHS 2.0.

revision 2020-10-13.

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. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| 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.