

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

1.1. Product identifier

Product form	: Mixture
Product name	: Advantage Graphene
Product code	: R293/10
Product group	: End product

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

1.2.1. Relevant identified uses

Main use category	: Consumer use, Industrial use, Professional use
Use of the substance/mixture	: Brush on Roof Coating

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ALL TIMES COATINGS LTD
UNITS 17/A NAILSWORTH MILLS ESTATE
NAILSWORTH
GLOUCESTERSHIRE
GL6 0BS +44 (0)1453 872850

1.4. Emergency telephone number

Emergency number	: +44(0)1453 872850 Office Hours Only
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

Precautionary statements (GB CLP)	: P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P262 - Do not get in eyes, on skin, or on clothing. P280 - Wear protective clothing, eye protection, face protection, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of water. P332+P313 - If skin irritation occurs: Get medical advice or attention. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice or attention. P314 - Get medical advice or attention, if you feel unwell.
EUH-statements (GB CLP)	: EUH208 - Contains TRIMETHOXYVINYL SILANE (2768-02-7). May produce an allergic reaction. EUH210 - Safety data sheet available on request.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

2.3. Other hazards

Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	TRIMETHOXYVINYLSILANE (2768-02-7), TITANIUM DIOXIDE (13463-67-7), CALCIUM CARBONATE (1317-65-3)
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	TRIMETHOXYVINYLSILANE (2768-02-7), TITANIUM DIOXIDE (13463-67-7), CALCIUM CARBONATE (1317-65-3)

Results of Endocrine Disruptor assessment

Component	
Substance(s) not considered as endocrine disrupting. They are not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, nor identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	CALCIUM CARBONATE(1317-65-3), TITANIUM DIOXIDE(13463-67-7), TRIMETHOXYVINYLSILANE(2768-02-7)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
CALCIUM CARBONATE substance with workplace exposure limit(s)	CAS-No.: 1317-65-3	21 – 30	Not classified
TITANIUM DIOXIDE substance with workplace exposure limit(s)	CAS-No.: 13463-67-7 EC-No.: 236-675-5 REACH-no: 01-2119489379-17	4.99 – 9.99	Carc. 2, H351
TRIMETHOXYVINYLSILANE	CAS-No.: 2768-02-7 EC-No.: 220-449-8 UK Index-No.: 014-049-00-0 REACH-no: 01-2119513215-52	1.99 – 4.99	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1.5 mg/l/4h) Skin Sens. 1B, H317 STOT RE 2, H373

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
Self protection of the first-aiders	: First-aiders should pay attention to their own protection and use the recommended personal protective equipment (see section 8).

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

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

Symptoms/effects after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: redness, itching, tears, stinging.
Symptoms/effects after ingestion	: May cause irritation to the digestive tract. Abdominal pain, nausea.

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

Treat symptomatically. Ensure eye bath is to hand.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible. Absorb spilled material with sand or earth.
Methods for cleaning up	: Take up liquid spill into absorbent material. Collect spillage. Collect leaking and spilled liquid in sealable containers as far as possible. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8. For further information refer to section 13.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep cool. Keep container tightly closed.
Storage area	: Store in a well-ventilated place.
Special rules on packaging	: Keep only in original container.
Packaging materials	: Always store product in container of same material as original container.

7.3. Specific end use(s)

Brush on Roof Coating.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

TITANIUM DIOXIDE (13463-67-7)

United Kingdom - Occupational Exposure Limits

Local name	Titanium dioxide
WEL TWA (OEL TWA)	4 mg/m ³ respirable 10 mg/m ³ total inhalable
WEL STEL (OEL STEL)*	12 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
	*STEL value is calculated based on the TWA limit

CALCIUM CARBONATE (1317-65-3)

United Kingdom - Occupational Exposure Limits

Local name	Calcium carbonate (Limestone, Marble)
WEL TWA (OEL TWA)	10 mg/m ³ total inhalable 4 mg/m ³ respirable
WEL STEL (OEL STEL)*	30 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
	*STEL value is calculated based on the TWA limit

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Goosewing Grey.
Odour	: Not available
Odour threshold	: Not available
pH	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flash point	: Not available
Flammability	: No data available
Explosive limits	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: Not available
Relative density	: 1.15
Density	: Not available
Solubility	: Material insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity, kinematic	: Not available

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Explosive properties : Not available

9.2. Other information

Particle characteristics : Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Heat.

10.5. Incompatible materials

basic substances and acids. Reaction causes the formation of ethanol. water.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

TITANIUM DIOXIDE (13463-67-7)

LD50 oral rat	> 5000 mg/kg bw/day
LD50 dermal rabbit	> 10000 mg/kg
LC50 Inhalation - Rat	> 6.82 mg/l

CALCIUM CARBONATE (1317-65-3)

LD50 oral rat	> 5000 mg/kg
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Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

TITANIUM DIOXIDE (13463-67-7)

pH	7 Source: ECHA
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Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

TITANIUM DIOXIDE (13463-67-7)

pH	7 Source: ECHA
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Respiratory or skin sensitisation : Skin sensitization: Not classified (Based on available data, the classification criteria are not met). Respiratory sensitization: Not classified (Based on available data, the classification criteria are not met).

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met).

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

TITANIUM DIOXIDE (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
TRIMETHOXYVINYLSILANE (2768-02-7)	
NOAEL (oral, rat, 90 days)	62.5 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
TRIMETHOXYVINYLSILANE (2768-02-7)	
Viscosity, kinematic	0.7 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'

Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: No data available.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

TRIMETHOXYVINYLSILANE (2768-02-7)	
LC50 - Fish [1]	> 92.2 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	168.7 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 957 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	52.4 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	28.1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

TITANIUM DIOXIDE (13463-67-7)	
LC50 - Fish [1]	> 100 mg/l
EC50 - Crustacea [1]	> 1000 mg/l
EC50 72h - Algae [1]	> 50 mg/l Source: ECHA

CALCIUM CARBONATE (1317-65-3)	
LC50 - Fish [2]	> 10000 mg/l
EC50 - Other aquatic organisms [1]	> 1000 mg/l
EC50 72h - Algae [1]	289 mg/l
NOEC chronic algae	75 mg/l Exposure Time 72H

12.2. Persistence and degradability

Advantage Graphene	
Persistence and degradability	No data available.

Advantage Graphene

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

TRIMETHOXYVINYLSILANE (2768-02-7)

Persistence and degradability	Not rapidly degradable
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TITANIUM DIOXIDE (13463-67-7)

Persistence and degradability	Not rapidly degradable
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CALCIUM CARBONATE (1317-65-3)

Persistence and degradability	Not rapidly degradable
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12.3. Bioaccumulative potential

Advantage Graphene

Bioaccumulative potential	No bioaccumulation data available.
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TRIMETHOXYVINYLSILANE (2768-02-7)

Partition coefficient n-octanol/water (Log Pow)	-0.82 Source: ECHA Registered substances
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12.4. Mobility in soil

Advantage Graphene

Ecology - soil	No data available.
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12.5. Results of PBT and vPvB assessment

Component

TRIMETHOXYVINYLSILANE (2768-02-7)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII
TITANIUM DIOXIDE (13463-67-7)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII
CALCIUM CARBONATE (1317-65-3)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

Ozone : Not classified (Based on available data, the classification criteria are not met)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal of this packaging should at all times comply with the waste disposal legislation and any regional local authority requirements.
Additional information	: Do not re-use empty containers.
Ecological waste information	: The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

Advantage Graphene

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Transport document description				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. National regulations

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

This product contains no substance(s) listed on the UK REACH Candidate List (SVHC).

GB PIC Regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

Drug Precursors Regulation (EC 273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:	
ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstracts Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)

Advantage Graphene

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Abbreviations and acronyms:

MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Advantage Graphene

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Full text of H- and EUH-statements:

EUH208	Contains 3-AMINOPROPYLTRIETHOXYSILANE (919-30-2) ([ATP 13]), TRIMETHOXYVINYLSILANE (2768-02-7). May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Safety Data Sheet (SDS), UK

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.