

Spectrum UltraGrip L240 MMA System
[Part.1 – Base | Part.2 – Catalyst | Part.3 – Aggregate]



SAFETY DATA SHEET – Part.1

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) 2015/830

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

1.1. Product identifier

Product Name	Spectrum UltraGrip L240 Resin
Product Inclusion	Part.1 of this document covers all colour variants in the Spectrum UltraGrip L240 MMA Paint range – Base only.
Container Size	18kg

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

Identified Uses	Base for road marking filler. Use only the hardener of the same reference. Respect the dosage base/hardener indicated by the supplier. For professional user/industrial user only.
Uses advised against	All uses not specified in this section or in section 7.3.

1.3. Details of the supplier of the safety data sheet

Supplier	Meon Ltd. Railside Northharbour Spur Portsmouth PO6 3TU +44 (0) 23 9220 0606 mail@meonuk.com
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1.4. Emergency Telephone Number

Emergency telephone	+44 (0) 808 118 1922
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of this product has been carried out in accordance with CLP Regulation (EC) no. 1272/2008
Flam. Liq. 2: Flammable liquids, Category 2, H225
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

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2.2. Label Elements

CLP Regulation (EC) no. 1272/2008

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

H225 - Highly flammable liquid and vapour
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation

Precautionary statement(s)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P370+P378 - In case of fire: Use ABC powder extinguisher to extinguish
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Supplementary information

Contains 2,2'-ethylenedioxydiethyl dimethacrylate, 2-ethylhexyl acrylate, Methacrylic acid, monoester with propane-1,2-diol, Methyl methacrylate, n-butyl acrylate.
EUH211: Warning! Hazardous respirable droplets may be formed when sprayed.
Do not breathe spray or mist.

Substances that contribute to the classification

Methyl methacrylate (CAS: 80-62-6); n-butyl acrylate (CAS: 141-32-2); 2,2'-ethylenedioxydiethyl dimethacrylate (CAS: 109-16-0); 2-ethylhexyl acrylate (CAS: 103-11-7)

Acute Toxicity Estimate (ATE mix)

25.25 % (oral) of the mixture consists of ingredient(s) of unknown toxicity

2.3. Other hazards

Product fails to meet PBT/vPvB criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance

Not applicable.

3.2. Mixtures







Chemical description

Mixture composed of additives, pigments and resins.

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Components

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 80-62-6	Methyl methacrylate⁽¹⁾ Flam. Liq. 2: H225; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 GHS02 GHS07 Dgr		5 - <15 %
CAS: 141-32-2	n-butyl acrylate⁽¹⁾ Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 – Warning GHS02 GHS07 Wng		5 - <15 %
CAS: 109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate⁽¹⁾ Skin Sens. 1: H317 - Warning		1 - <5 %
CAS: 103-11-7	2-ethylhexyl acrylate⁽¹⁾ Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 – Warning GHS07 Wng		1 - <5 %
CAS: 27813-02-1	Methacrylic acid, monoester with propane-1,2-diol⁽¹⁾ Eye Irrit. 2: H319; Skin Sens. 1: H317 - Warning		<0.5 %
CAS: 38668-48-3	1,1'-(p-tolylimino)dipropan-2-ol⁽¹⁾ Acute Tox. 2: H300; Aquatic Chronic 3: H412 Eye Irrit. 2: H319 - Danger		<0.5 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: First aid measures

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

4.1. Description of first aid measures

General information

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

Inhalation

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

Ingestion/Aspiration

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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Skin contact	Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.
Eye contact	Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not applicable.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media If possible, use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2. Special hazards arising from the substance or mixture

Specific hazards As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3. Advice for firefighters

Advice or firefighters Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit) in accordance with Directive 89/654/EC.

Additional provisions

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

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6.2. Environmental precautions

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3. Methods and material for containment and cleaning up

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place.

Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4. Reference to other sections

Reference to other sections

See sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions on safe handling

Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

Technical recommendations for the prevention of fires and explosions

Transfer in well-ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibers, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3).

7.2. Conditions for safe storage, including any incompatibilities.

Technical measures for storage

Minimum Temp.: 5 °C
Maximum Temp.: 30 °C
Maximum Time.: 6 months

General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5.

7.3. Specific end use(s)

Specific end use(s)

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Substances whose occupational exposure limits have to be monitored in the workplace:

Identification	Environmental limits		
Methyl methacrylate CAS: 80-62-6	IOELV (8h)	50 ppm	208 mg/m ³
	IOELV (STEL)	100 ppm	416 mg/m ³
n-butyl acrylate CAS: 141-32-2	IOELV (8h)	1 ppm	5 mg/m ³
	IOELV (STEL)	5 ppm	26 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Methyl methacrylate CAS: 80-62-6 EC: 201-297-1	Oral	Not applicable	Not applicable	Non-applicable	Not applicable
	Dermal	Not applicable	Not applicable	13.67 mg/kg	Not applicable
	Inhalation	Not applicable	416 mg/m ³	348.4 mg/m ³	208 mg/m ³
n-butyl acrylate CAS: 141-32-2 EC: 205-480-7	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Dermal	Not applicable	Not applicable	Not applicable	Not applicable
	Inhalation	Not applicable	Not applicable	Not applicable	11 mg/m ³
2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0 EC: 203-652-6	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Dermal	Not applicable	Not applicable	13.9 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	48.5 mg/m ³	Not applicable
2-ethylhexyl acrylate CAS: 103-11-7 EC: 203-080-7	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Dermal	Not applicable	Not applicable	6.5 mg/kg	Not applicable
	Inhalation	Not applicable	38 mg/m ³	Not applicable	38 mg/ m ³
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1 EC: 248-666-3	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Dermal	Not applicable	Not applicable	4.2 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	14.7 mg/m ³	Not applicable
1,1'-(p-tolyimino)dipropan-2-ol CAS: 38668-48-3 EC: 254-075-1	Oral	Not applicable	Not applicable	Not applicable	Not applicable
	Dermal	Not applicable	Not applicable	0.7 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	2.47 mg/m ³	Not applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Methyl methacrylate CAS: 80-62-6 EC: 201-297-1	Oral	Not applicable	Not applicable	8.2 mg/kg	Not applicable
	Dermal	Not applicable	Not applicable	8.2 mg/kg	Not applicable
	Inhalation	Not applicable	208 mg/m ³	74.3 mg/m ³	104 mg/m ³
	Oral	Not applicable	Not applicable	8.33 mg/kg	Not applicable

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2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0 EC: 203-652-6	Dermal	Not applicable	Not applicable	8.33 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	14.5 mg/kg	Not applicable
2-ethylhexyl acrylate CAS: 103-11-7 EC: 203-080-7	Oral	Not applicable	Not applicable	0.23 mg/kg	Not applicable
	Dermal	Not applicable	Not applicable	2.34 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	Not applicable	4.5 mg/m ³
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1 EC: 248-666-3	Oral	Not applicable	Not applicable	2.5 mg/kg	Not applicable
	Dermal	Not applicable	Not applicable	2.5 mg/kg	Not applicable
	Inhalation	Not applicable	Not applicable	8.8 mg/m ³	Not applicable
1,1'-(p-tolylimino)dipropen-2-ol CAS: 38668-48-3 EC: 254-075-1	Oral	Not applicable	Not applicable	0.25 mg/kg	Not applicable
	Dermal	Not applicable	Not applicable	Not applicable	Not applicable
	Inhalation	Not applicable	Not applicable	Not applicable	Not applicable

PNEC:

Identification					
Methyl methacrylate CAS: 80-62-6 EC: 201-297-1	STP	10 mg/L	Fresh water	0.94 mg/L	
	Soil	1.48 mg/kg	Marine water	0.094 mg/L	
	Intermittent	0.94 mg/L	Sediment (Fresh water)	10.2 mg/kg	
	Oral	Not applicable	Sediment (Marine water)	0.102 mg/kg	
n-butyl acrylate CAS: 141-32-2 EC: 205-480-7	STP	3.5 mg/L	Fresh water	0.003 mg/L	
	Soil	1 mg/kg	Marine water	0 mg/L	
	Intermittent	0.011 mg/L	Sediment (Fresh water)	0.034 mg/kg	
	Oral	Not applicable	Sediment (Marine water)	0.003 mg/kg	
2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0 EC: 203-652-6	STP	1.7 mg/L	Fresh water	0.016 mg/L	
	Soil	0.027 mg/kg	Marine water	0.002 mg/L	
	Intermittent	0.016 mg/L	Sediment (Fresh water)	0.185 mg/kg	
	Oral	Not applicable	Sediment (Marine water)	0.018 mg/kg	
2-ethylhexyl acrylate CAS: 103-11-7 EC: 203-080-7	STP	2.3 mg/L	Fresh water	0.00272 mg/L	
	Soil	1 mg/kg	Marine water	0.000272 mg/L	
	Intermittent	0.011 mg/L	Sediment (Fresh water)	0.108 mg/kg	
	Oral	Not applicable	Sediment (Marine water)	0.0108 mg/kg	
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1 EC: 248-666-3	STP	10 mg/L	Fresh water	0.904 mg/L	
	Soil	0.727 mg/kg	Marine water	0.904 mg/L	
	Intermittent	0.972 mg/L	Sediment (Fresh water)	6.28 mg/kg	
	Oral	Not applicable	Sediment (Marine water)	6.28 mg/kg	
1,1'-(p-tolylimino)dipropen-2-ol CAS: 38668-48-3 EC: 254-075-1	STP	199.5 mg/L	Fresh water	0.017 mg/L	
	Soil	0.023 mg/kg	Marine water	0.002 mg/L	
	Intermittent	0.17 mg/L	Sediment (Fresh water)	0.163 mg/kg	
	Oral	Not applicable	Sediment (Marine water)	0.016 mg/kg	

8.2. Exposure controls

General safety and hygiene measures in the workplace


As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use,

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cleaning, maintenance, class of protection) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

Respiratory protection


Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases, vapours and particles	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

Specific protection for the hands


Pictogram	PPE	Remarks
 Mandatory hand protection	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2003+A1:2009 and EN ISO 374-1:2016

As the product is a mixture of several substances, the resistance of the glove material cannot be predicted in advance with total reliability and has therefore to be checked prior to the application.


Ocular and facial protection

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.



Bodily protection

Pictogram	PPE	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing	Limited protection against flames.

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 Mandatory foot Protection	Safety footwear with antistatic and heat resistant properties	Replace boots at any sign of deterioration.
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Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1 D.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

For complete information see the product datasheet

Appearance

Physical state at 20 °C	Liquid
Appearance	Viscous
Colour	According to the markings on the package
Odour	Characteristic
Odour threshold	Not applicable *

Volatility

Boiling point at atmospheric pressure	>100 °C
Vapour pressure at 40 °C	6469 Pa
Vapour pressure at 50 °C	10245.59 Pa (10.25 kPa)
Evaporation rate at 40 °C	Not applicable *

Product description

Density at 40 °C	1815.1 kg/m ³
Relative density at 40 °C	<1.765 – 1.865
Dynamic viscosity at 40 °C	Not applicable *
Kinematic viscosity at 40 °C	Not applicable *
Concentration	Not applicable *
pH	Not applicable *
Vapour density at 20 °C	Not applicable *
Partition coefficient n-octanol/water at 20 °C	Not applicable *
Solubility in water at 20 °C	Not applicable *
Solubility properties	Not applicable *
Decomposition temperature	Not applicable *
Melting point/Freezing point	Not applicable *
Explosive properties	Not applicable *

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Oxidising properties	Not applicable *
Flammability	
Flash point	22 °C
Flammability (solid, gas)	Not applicable *
Autoignition temperature	>258 °C
Lower flammability limit	Not available
Upper flammability limit	Not available
Explosive	
Lower explosive limit	Not applicable *
Upper explosive limit	Not applicable *

9.2. Other information

Surface tension at 40 °C	Not applicable *
Refraction index	Not applicable *

* Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2. Chemical stability

Chemically stable under the conditions of storage, handling and use.

10.3. Possibility of hazardous reactions

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4. Conditions to avoid

Applicable for handling and storage at room temperature

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5. Incompatible materials

Acids	Water	Combustive materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6. Hazardous decomposition products

Contains substances highly reactive and can auto-polymerize as a result of internal peroxide accumulation. The peroxides formed in these reactions are extremely shock- and heat-sensitive.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

The experimental information related to the toxicological properties of the product itself is not available.

Dangerous health implications

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

Ingestion (acute effect)

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Acute toxicity	Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
Corrosivity/Irritability	The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
Inhalation (acute effect)	
Acute toxicity	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
Corrosivity/Irritability	Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.
Contact with the skin and the eyes (acute effect)	
Contact with the skin	Produces skin inflammation.
Contact with the eyes	Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.
CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction)	
Carcinogenicity	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
IARC	Methyl methacrylate (3); n-butyl acrylate (3); N,N-dimethyl-p-toluidine (2B); 2-ethylhexyl acrylate (3); Titanium dioxide (2B).
Mutagenicity	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Reproductive toxicity	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Sensitizing effects	
Respiratory	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
Cutaneous	Prolonged contact with the skin can result in episodes of allergic contact dermatitis.
Specific target organ toxicity (STOT) - single exposure	Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.
Specific target organ toxicity (STOT)-repeated exposure	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Skin	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Aspiration hazard	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Other information	Not applicable.

Specific toxicology information on the substances

Identification	Acute toxicity	Genus
Methyl methacrylate CAS: 80-62-6	LD50 oral	5000 mg/kg
	LD50 dermal	5000 mg/kg
	LC50 inhalation	29.8 mg/L (4 h)
2-ethylhexyl acrylate	LD50 oral	4435 mg/kg

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CAS: 103-11-7	LD50 dermal	7552 mg/kg	
	LC50 inhalation	Not applicable	
1,1'-(p-tolylimino)dipropan-2-ol CAS: 38668-48-3	LD50 oral	25 mg/kg	Rat
	LD50 dermal	Not applicable	
	LC50 inhalation	Not applicable	
2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0	LD50 oral	10837 mg/kg	Rat
	LD50 dermal	Not applicable	
	LC50 inhalation	Not applicable	
n-butyl acrylate CAS: 141-32-2	LD50 oral	4000 mg/kg	
	LD50 dermal	Not applicable	
	LC50 inhalation	Not applicable	
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	LD50 oral	11200 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	Rabbit
	LC50 inhalation	Not applicable	

Acute Toxicity Estimate (ATE mix)

ATE mix		Ingredient(s) of unknown toxicity
Oral	10541.23 mg/kg (Calculation method)	25.25%
Dermal	>5000 mg/kg (Calculation method)	Not applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Not applicable

SECTION 12: Ecological information

The experimental information related to the ecotoxicological properties of the product itself is not available.

12.1. Toxicity

Acute toxicity:

Identification	Acute toxicity		Species	Genus
Methyl methacrylate CAS: 80-62-6	LC50	191 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	69 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	170 mg/L (96 h)	Selenastrum capricornutum	Algae
n-butyl acrylate CAS: 141-32-2	LC50	5.2 mg/L (96 h)	Salmo gairdneri	Fish
	EC50	230 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	5.5 mg/L (96 h)	Selenastrum capricornutum	Algae
2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0	LC50	16.4 mg/L (96 h)	Danio rerio	Fish
	EC50	Not applicable		
	EC50	Not applicable		
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	LC50	833 mg/L (96 h)	Scophthalmus maximus	Fish
	EC50	210 mg/L (48 h)	Acartia tonsa	Crustacean
	EC50	Not applicable		
	LC50	17 mg/L (96 h)	Brachydanio rerio	Fish

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1,1'-(p-tolylimino)dipropan-2-ol CAS: 38668-48-3	EC50	28.8 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	245 mg/L (72 h)	Desmodesmus subspicatus	Algae

Chronic toxicity:

Identification	Concentration	Species	Genus
Methyl methacrylate CAS: 80-62-6	NOEC 9.4 mg/L	Danio rerio	Fish
	NOEC 37 mg/L	Daphnia magna	Crustacean
n-butyl acrylate CAS: 141-32-2	NOEC Not applicable		
	NOEC 0.136 mg/L	Daphnia magna	Crustacean
2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0	NOEC Not applicable		
	NOEC 32 mg/L	Daphnia magna	Crustacean
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	NOEC Not applicable		
	NOEC 45.2 mg/L	Daphnia magna	Crustacean

12.2. Persistence and degradability

Identification	Degradability	Biodegradability
Methyl methacrylate CAS: 80-62-6	BOD5	Not applicable
	COD	Not applicable
	BOD5/COD	Not applicable
n-butyl acrylate CAS: 141-32-2	BOD5	Not applicable
	COD	Not applicable
	BOD5/COD	Not applicable
2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0	BOD5	Not applicable
	COD	Not applicable
	BOD5/COD	Not applicable
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	BOD5	Not applicable
	COD	Not applicable
	BOD5/COD	Not applicable

12.3. Bioaccumulative potential

Identification	Bioaccumulation potential	
Methyl methacrylate CAS: 80-62-6	BCF	7
	Pow Log	1.38

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	Potential	Low
n-butyl acrylate CAS: 141-32-2	BCF	37
	Pow Log	2.36
	Potential	Moderate
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	BCF	3
	Pow Log	0.97
	Potential	Low

12.4. Mobility in soil

Identification	Absorption/desorption		Volatility	
Methyl methacrylate CAS: 80-62-6	Koc	Not applicable	Henry	Not applicable
	Conclusion	Non-applicable	Dry soil	Not applicable
	Surface tension	2.551E-2 N/m (25 °C)	Moist soil	Not applicable
n-butyl acrylate CAS: 141-32-2	Koc	Not applicable	Henry	Not applicable
	Conclusion	Not applicable	Dry soil	Not applicable
	Surface tension	2.598E-2 N/m (25 °C)	Moist soil	Not applicable
2,2'-ethylenedioxydiethyl dimethacrylate CAS: 109-16-0	Koc	78	Henry	9.26E-6 Pa·m ³ /mol
	Conclusion	High	Dry soil	No
	Surface tension	Not applicable	Moist soil	No
2-ethylhexyl acrylate CAS: 103-11-7	Koc	Not applicable	Henry	Not applicable
	Conclusion	Not applicable	Dry soil	Not applicable
	Surface tension	2.58E-2 N/m (25 °C)	Moist soil	Not applicable
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	Koc	80	Henry	9E-4 Pa·m ³ /mol
	Conclusion	High	Dry soil	Not applicable
	Surface tension	Not applicable	Moist soil	Not applicable
1,1'-(p-tolylimino)dipropen-2-ol CAS: 38668-48-3	Koc	10	Henry	3.98E-5 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	No
	Surface tension	Not applicable	Moist soil	No

12.5. Results of PBT and vPvB assessment

Product fails to meet PBT/vPvB criteria.

12.6. Other adverse effects

Not described.

SECTION 13: Disposal considerations

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Code	08 01 11*
Description	waste paint and varnish containing organic solvents or other hazardous substances
Waste class (Regulation (EU) No 1357/2014)	Dangerous

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Type of waste (Regulation (EU) No 1357/2014)

HP3 Flammable, HP13 Sensitising, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation)

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management

In accordance with Annex II of Regulation (EC) No. 1907/2006 (REACH) the community or state provisions related to waste management are stated.

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014.

SECTION 14: Transport information

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for Air Transport.

14.1. UN number

ADR 2019 and RID 2019	UN1263
IMDG 38-16	UN1263
IATA/ICAO 2019	UN1263

14.2. UN proper shipping name

ADR 2019 and RID 2019	PAINT
IMDG 38-16	PAINT
IATA/ICAO 2019	PAINT

14.3. Transport hazard class(es)

ADR 2019 and RID 2019	3
IMDG 38-16	3
IATA/ICAO 2019	3

Transport Labels



14.4. Packing group

ADR 2019 and RID 2019	II
IMDG 38-16	II
IATA/ICAO 2019	II

14.5. Environmental hazards

ADR 2019 and RID 2019	No
IMDG 38-16	No
IATA/ICAO 2019	No

14.6. Special precautions for user

ADR 2019 and RID 2019	
Special regulations	367, 163
Physico-Chemical properties	See Section 9
IMDG 38-16	

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Special regulations	367, 163
EmS code	F-E, S-E
Physico-Chemical properties	See Section 9
Limited quantities	5 L
Segregation group	Not applicable
IATA/ICAO 2019	
Physico-Chemical properties	See Section 9
Segregation group	Not applicable

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

ADR 2019 and RID 2019	Not applicable
IMDG 38-16	Not applicable
IATA/ICAO 2019	Not applicable

SECTION 15: Regulatory information

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

The Control of Major Accident Hazards Regulations 2015:

Section	Description	Lower-tier requirements	Upper tier requirements
P5c	Flammable liquids	5000	50000

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc)

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.
 The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.
 Control of Substances Hazardous to Health Regulations 2002 (as amended)
 EH40/2005 Workplace exposure limits.

15.2. Chemical safety assessment

The supplier has not carried out evaluation of chemical safety.

SECTION 16: Other information

Legislation related to safety data sheets

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830).

Texts of the legislative phrases mentioned in section 2

H315 - Causes skin irritation

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H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation
H225 - Highly flammable liquid and vapour

Texts of the legislative phrases mentioned in section 3

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

CLP Regulation (EC) no. 1272/ 2008

Acute Tox. 2: H300 - Fatal if swallowed
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects
Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
Flam. Liq. 3: H226 - Flammable liquid and vapour
Skin Irrit. 2: H315 - Causes skin irritation
Skin Sens. 1: H317 - May cause an allergic skin reaction
STOT SE 3: H335 - May cause respiratory irritation

Classification procedure

Skin Irrit. 2: Calculation method
Skin Sens. 1: Calculation method
STOT SE 3: Calculation method
Flam. Liq. 2: Calculation method (2.6.4.3)

Advice related to training

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
Koc: Partition coefficient of organic carbon

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

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SAFETY DATA SHEET – Part.2 of 3.

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) 453/2010

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

1.1. Product identifier

Product Name	MMA Resin Peroxide
Product Inclusion	MMA Resin Peroxide – catalyst only.
Container Size	80g

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

Identified Uses	Hardener for road marking filler (3 components) Mix only the Catalyst Part B Respect the dosage Part B/hardener indicated by the supplier. Professional use only
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	Meon Ltd. Railside Northharbour Spur Portsmouth PO6 3TU +44 (0) 23 9220 0606 mail@meonuk.com
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1.4. Emergency Telephone Number

Emergency telephone	+44 (0) 808 118 1922
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to regulation EC1272/2008 and amendments

Org. Perox. D Category D – H242
SKIN Sens. 1 – Hazard category 1 – H317
Eye Irrit. 2 – Hazard category 2 – H319
Aquatic Acute. 1 – Hazard category 1 – H400
Aquatic Chronic. 1 – Hazard. Category 1 – H410
Repr. 1B – Hazard Category 1B – H360D

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2.2. Label Elements

Hazard pictograms



Signal word

Danger

H-statement(s)

H242 – Heating may cause a fire.
 H317 – May cause an allergic skin reaction.
 H319 – Causes serious eye irritation.
 H360D May damage the unborn child.
 H410 Very toxic to aquatic life with long lasting effects

P-statement(s)

P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P220 Keep away from strong acids, bases, heavy metals salts and other reducing substances.
 P234 Keep only in original container.
 P261 Avoid breathing dust/vapours.
 P273 – Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove cc lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P501 - Dispose of contents/container in accordance with local and national regulation

2.3. Other hazards

The mixture component: dicyclohexyl phthalate CAS: 84-61-7 is on the Candidate List SVHC

SECTION 3: Composition/information on ingredients

SUBSTANCE [] MIXTURE [X]

Dangerous component(s)

Ingredient	CAS No. EC No. REACH No.	Index	Classification (EC) 1272/2008	Concentration
Dibenzoyl peroxide	94-36-0 202-327-6 01-2119511472-50-0001	617-008-00-0	Org. Perox. B – H241 Skin Sens. 1 – H317 Eye Irrit. 2 – H319 Aquatic Acute 1 – H400 (M=10)** Aquatic Chronic 1, H410; M=10 GHS01 GHS02 GHS07 Dgr	49-52.5%

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Diclohexyl phtalate	84-61-7 201-545-9 01-2119978223-34-0000	607-719-00-4	Skin Sens. 1, H317 Repr. 1B, H360D Aquatic Chronic 3, H412 GHS08 GHS07 Dgr	47.5-51%
silicon dioxide obtained by chemical transformation	112926-00-8 7631-86-9 231-545-4 01-2119379499-16-0000	-	Not classified	<0.5%

SECTION 4: First aid measures

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

4.1. Description of first aid measures

- In case of inhalation:** Move immediately subject to fresh air and keep him calm.
Place the victim in a position where it can easily breathe.
If breathing is difficult, seek medical attention.
- In case of skin contact:** Wash immediately with non-abrasive soap and plenty of water, at least 15 minutes. If skin irritation persists, consult a doctor.
Wash contaminated clothing before re-using.
- In case of eye contact:** Rinse immediately with plenty of water for at least 15 minutes, holding eyelids open.
If the person uses contact lenses, remove them with caution.
Quickly consult a specialist if irritation persists.
- In case of ingestion:** Do not induce vomiting. Get medical attention immediately.

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

Sensitization of the skin - redness, swelling, irritation of the eyes.
Suspected of damaging fertility or the unborn child

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media water spray, carbon dioxide, foam, sand.

Extinguishing media which must not be used for safety reasons Do not use halons.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting Contains substances that may result in explosion caused by heat.
The product decomposes in an explosive way from 60°C.
The products of decomposition must be considered as potentially dangerous and precautions must be taken in consequences (mix of benzene, benzoic acid, biphenyl, phenyl benzoate, carbon dioxide).

5.3. Advice for firefighters

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Special protective equipment for firefighting. Wear full firefighting protective clothing and self-contained breathing apparatus.
Use water spray to keep fire-exposed containers cool.
Do not allow fire extinguishing water to contaminate surface or groundwater systems.

Further information Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition, containers and equipment located near the fire should be cooled with water; water used to extinguish fire should not get into the sewer system and waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing, protective gloves, eye protection and face. Do not let to contaminate the peroxide into drains and ground water; avoid hot, contact with combustible materials and flammable substances.

6.2. Environmental precautions

Do not let enter drains, surface and ground water and soil.

6.3. Methods and material for containment and cleaning up

Protect drains. Collect material into sealable plastic containers and transported to the disposal site. Waste should NOT be closed.

Reference to other sections

See section 8 for information on personal protection equipment.

See section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions on safe handling

Weigh at temperature below than +25°C, do not mix directly with reducing agents, promoters, etc. Do not shake, do not throw, etc. Do not eat, drink or smoke in the production and storage. After work, wash your hands every time. Keep work clothing separately and do not take home. Do not use tools that cause sparks.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from sources of ignition, heat, light, at a temperature below +30°C.

Do not smoke, before and after contact with the peroxide wash your hands thoroughly; Only use of a suitable tool material (polyethylene, polypropylene, stainless steel).

7.3. Specific and uses

No information about other applications than the udder in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Regulation of the Minister of Labor and Social Policy of 12 June 2018 on the highest allowable concentrations and intensities of agents harmful to health in the work environment (Journal of Laws of 2018, item 1286 of 3 July 2018)

Dibenzoyl peroxide

NDS – 5 mg/m³

NDSCH – 10 mg/m³

TWA – 5 mg/m³

DNEL for workers (Chronic exposure by inhalation systemic) 39 mg/m³.

DNEL for workers (dermal chronic, systemic): 13,3 mg / kg body weight / day

DNEL for workers (dermal chronic, local): 34 µg/cm²

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Dicyclohexyl phthalate

NDS: not determined.

NDSCh: not determined.

DNEL for employee (chronic exposure by inhalation, systemic): 35.2 mg/m³

DNEL for workers (dermal chronic, systemic): 0.5 mg/kg/day

DNEL general population (chronic exposure by inhalation, systemic): 0.87 mg/m³

DNEL general population (chronic exposure through the skin, systemic): 0.25 mg/kg/day

DNEL general population (chronic oral, systemic): 0.25 mg/kg/day

Silicon dioxide obtained by chemical transformation

total dust – NDS - 10 mg/m³

respirable dust- NDS - 2 mg/m³

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Make sure that working area is well ventilated. Explosion proof ventilation is recommended.

8.2.2. Individual protection measure, such as personal protective equipment a

Eye/face protection Use safety goggles or face protection from plexiglass.

Skin protection Use appropriate protective antistatic clothing.

Hand protection Use appropriate protective gloves of synthetic rubber like neoprene or butyl-rubber (thickness: 0.5 mm, rupture time > 8h).

Respiratory protection Use short duration filter unit: Filter A

Thermal hazards in normal work condition no thermal hazard.

Hygiene at the work General regulations on hygiene. Do not allow them to cross in the workplace environment, regulatory exposure limits. After working Remove contaminated clothing - not to take home. Do not eat, drink or smoke in the production and storage facilities. After work, wash your hands each time.

8.2.3. Environmental exposure controls

Protect against the introduction into the municipal water and sewage system and watercourses.

Dibenzoyl peroxide:

PNEC freshwater: 0.02 µg / l

PNEC sea water: 0.002 µg / l

PNEC sediment-freshwater: 0.013 mg / kg

PNEC sediment-sea water: 0.001 mg / kg

PNEC soil: 0.002 mg / kg soil

PNEC STP: 0.35 mg / l

Dicyclohexyl phthalate:

PNEC: freshwater water: 0.00362 mg/l

PNEC sea water: 0.000362 mg/l

PNEC periodic release: 0.0362 mg/l

PNEC sediment- sea water: 1.06 mg/kg

PNEC soil: 0.21 mg/kg

PNEC STP: 10 mg/

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance- Colour - Odour Solid. Powdery – White - faint odour

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pH	Ca. 7
Boiling Point [°C]	Not determined.
Flash point	Not determined.
Evaporate Rate	Not determined.
Solubility in water	Insoluble
Flammable limits	Not applicable.
Vapour pressure	Not applicable.
Relative vapour density (related to air)	630kg/ m ³
Gravity	620 kg/m ³ - 20°C
Partition coefficient (n-octanol/water)	Not determined.
Auto ignition temperature	Not determined.
Decomposition temperature	+55°C
Viscosity	Not applicable.
Explosive properties	One component (benzoyl peroxide is explosive)
Oxidising properties	Organic peroxide

9.2. Other information

Active oxygen content: 3.24 – 3.47%

SECTION 10: Stability and reactivity

10.1. Reactivity

sensitive to exothermic decomposition, decomposition is initiated by heat, contact with impurities (e.g., acids, heavy metal compounds, amines), friction or impact.

10.2. Chemical stability

under heat rapidly disintegrate.

10.3. Possibility of hazardous reactions

SADT (self accelerating decomposition temperature) possible at temperature above approximately +55°C, vapour may form explosive mixtures with air.

10.4. Conditions to avoid

Avoid high temperatures, light, pollution, rust.

10.5. Incompatible materials

Avoid contact with rust, copper, heavy metals, strong oxidizing agents, strong acids and strong bases.

10.6. Hazardous decomposition products

hydrocarbons, derivatives of benzoic acid, irritating, corrosive, flammable gases may be formed in a fire or decomposition.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

The mixture was not tested, application of the conventional method from different substances which compose it.

Acute Toxicity

Chemical name: DIBENZOYL PEROXIDE
Oral: no adverse effect observed
DNEL: 2000 mg/kg bw; LD50(mouse): > 2000 mg/kg
Dermal: no study available

Skin corrosion/irritation: No adverse effect observed – not irritant

Serious eye Adverse effect observed – irritant

damage/irritation:

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Respiratory or skin sensitisation:	Adverse effect observed – cause sensitisation by skin contact
Germ cell mutagenicity:	In vitro/in vivo - no adverse effect observed (negative result)
Carcinogenicity:	Oral, skin -no relevant information available Inhalation – no data available
Reproductive toxicity:	No data available
STOT – single exposure	Not classified based on available information
STOT – repeated exposure	Not classified based on available information
Repeated dose toxicity	Not classified for repeated dose toxicity oral: adverse effect observed NOAEL: 200 mg/kg bw/day (rat, chronic) skin (systemic): no adverse effect observed NOAEL: 833 mg/kg bw/day (rat, chronic) skin (local): adverse effect observed NOAEL: 0.17 mg/cm ² (mouse, chronic) Inhalation (systemic, local): no data available
Aspiration hazard	Not classified based on available information.

Chemical name:	DICYCLOHEXYL PHTHALATE
Acute toxicity:	LD50 (rat):> 2000 mg / kg
Skin corrosion/irritation:	Not present – not classified
Serious eye damage/irritation:	Eyes – slight irritation – not classified
Respiratory or skin sensitisation:	Possible sensitization by skin contact
Germ cell mutagenicity:	Does not occur
Carcinogenicity:	Does not occur
Reproductive toxicity:	may damage the unborn child rat 240 ppm NOAEL
STOT – single exposure	No data available
STOT – repeated exposure	No data available
Repeated dose toxicity	NOAEL rat, 50 mg/kg bw../day
Aspiration hazard	No data available

Acute toxicity:	SILICON DIOXIDE OBTAINED BY CHEMICAL TRANSFORMATION oral - LD50 (rat):> 10000 mg / kg inhalation - LC0 (rat, 4h): 0.139 mg / l skin - LC50(rabbit): > 5000 mg / kg
Skin corrosion/irritation:	Not present – not classified
Serious eye damage/irritation:	Not present – not classified
Respiratory or skin sensitisation:	Not present – not classified
Germ cell mutagenicity:	Does not occur
Carcinogenicity:	Does not occur
Reproductive toxicity:	Does not occur
STOT – single exposure	No data available
STOT – repeated exposure	No data available
Repeated dose toxicity	No data available
Aspiration hazard	No data available

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[Part.1 – Base | Part.2 – Catalyst | Part.3 – Aggregate]

SECTION 12: Ecological information

The mixture was not tested, application of the conventional method from different substances which compose it.

12.1. Toxicity

Substance(s)			EC50	CL50	LC50	Species
Dibenzoyl peroxide - factor M = 10	NOEC	0.110 mg/l	0.0765 mg/l		0.110 mg/l	Daphnia magna (48h)
	NOEC	0.0602 mg/l	0.0602 mg/l			Fish (96h)
	NOEC	0.0711 mg/l	0.0711 mg/l			Algae (72h)
	NOEC	35 mg/l	35 mg/l			Bacteria (0.5h)
Dicyclohexyl Phthalate			2mg/l acute toxic			Daphnia magna (48h)
	NOEC	0.679 mg/l chronic toxic				Daphnia magna (21 days)
					>2 mg/l	Fish (96h)
					0.06mg/l	Algae (72h)

12.2. Persistence and degradability

DIBENZOYL PEROXIDE:

It is hydrolytically unstable under basic conditions, acidic and neutral. Benzoic acid is the major compound produced by the decomposition during hydrolysis.

DICYCLOHEXYL PHTHALATE:

readily biodegradable - 91% - 28 days

12.3. Bioaccumulative potential

DIBENZOYL PEROXIDE:

Log Kow = 3.2 indicates a low probability of bioaccumulation; readily biodegradable

DICYCLOHEXYL PHTHALATE:

Potential low

Ig Pow 4.82 (25oC)

BCF: 85 – 90

12.4. Mobility in soil

DIBENZOYL PEROXIDE:

Koc = 6310 at temp. 20oC

DICYCLOHEXYL PHTHALATE:

substance is insoluble.

log Koc=3.46 w temp. 20oC

12.5. Results of PBT and vPvB assessment

This product does not contain any BPT or vPvB substance.

12.6. Other adverse effects

No data available.


SECTION 13: Disposal considerations

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[Part.1 – Base | Part.2 – Catalyst | Part.3 – Aggregate]

13.1. Waste treatment methods

Spilled products collect for recycling. The product expired - for recycling. Waste code 16 03 05* "organic wastes containing dangerous substances". The product may be disposed of by incineration. Burning should be done in a location away from buildings and industrial facilities in a specialized furnace to burn waste chemicals. Packaging of the product be disposed of as hazardous waste code 15 01 10* "Packaging containing residues of or contaminated by dangerous ..."

SECTION 14: Transport information

	ADR / RID	IMDG	IATA
14.1 N° ONU	3106		
14.2 UN proper shipping name	PEROXYDE ORGANIQUE de type D, solide (Dibenzoyl peroxyde)		
14.3 Transport hazard classe label	5.2 		
14.4 Packing Group	Non-applicable	Non-applicable	Non-applicable
14.5 Dangerous for Environment	Yes	Yes	Yes
14.6 Special precautions for users	Tunnel restriction: D Limited quantities: 500g	Limited quantities :500g	
14.7 Transport in bulk (annexe II MARPOL 73/78 ans IBC code)	Not authorized for carriage in bulk		

SECTION 15: Regulatory information

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

Regulation No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation).

European Agreement Concerning the International Carriage of Dangerous Goods by Road, 2019

Candidate List SVHC, updated on 16/01/2020:

There is the component of the mixture on the list - Dicyclohexyl phthalate CAS: 84-61-7

15.2 Chemical safety assessment

Data not available.

SECTION 16: Other information

Relevant H & R phrases from section 3

H241 Heating may cause a fire or explosion.

H317 May cause an allergic skin reaction.

H319 Irritating to eyes.

H360D May damage the unborn child.

H400 Very toxic to aquatic organisms

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H410 Very toxic to aquatic life with long lasting effects

H412 Harmful to aquatic life with long lasting effects

Abbreviations and acronyms

Explanation of abbreviations / acronyms

BCF – Bio Concentration Factor

DNEL - derived dose level (concentration) at which no observed adverse effect level [mg/kg, mg/l]

PNEC - predicted concentrations do not cause changes in the environment [mg/kg, mg/l]

NOEC - the highest dose, or concentration of a toxic substance at which no adverse effect is observed in its operation.

NOAEL - no observable adverse effect level

NDS Exposure Limit - the average weighted concentration, the impact on the employee, during an 8-hour daily and average weekly working time laid down in the Labour Code, the period of its activity should not cause negative changes in its state of health and in the health of future generations.

NDSC - Maximum Acceptable Concentrations Momentarily - the average concentration that should not cause adverse changes in the health of the worker, whether in the workplace no longer than 15 minutes and not more than two times during the work shift, with an interval of not less than one hour.

Training: Those involved in trading a hazardous substance should be trained in the handling, safety and hygiene.

Drivers should be trained and obtain proper certification in accordance with the requirements of ADR.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

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SAFETY DATA SHEET – Part.3

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) 453/2010

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

1.1. Product identifier

Product Name	Aggregate 0.9–1.4mm Buff Bauxite
Product Inclusion	Part.3 of this document covers Aggregate 0.9–1.4mm Buff Bauxite only.
Container Size	2kg

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

Identified Uses	Refractory raw material, road surfacing aggregate, welding.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	Meon Ltd. Railside Northarbour Spur Portsmouth PO6 3TU +44 (0) 23 9220 0606 mail@meonuk.com
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1.4. Emergency Telephone Number

Emergency telephone	+44 (0) 808 118 1922
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Product definition: UVCB

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

Not classified.

Ingredients of unknown toxicity: Percentage of the mixture consisting of ingredients of unknown toxicity: 100%

Ingredients of unknown toxicity: Percentage of the mixture consisting of ingredients of unknown hazards to aquatic environment: 100%

Classification according to Directive 67/548/EEC

Not classified.

See section 16 for the full text of the R phrases or H statements declared above.

See section 11 for more detailed information on health effects and symptoms.

2.2. Label Elements

Hazard pictograms

Not applicable.

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Signal word

No signal word.

Hazard statements

No known significant effects or critical hazards.

Precautionary statements

Prevention:	Not applicable
Response:	Not applicable
Storage:	Not applicable
Disposal:	Not applicable

2.3. Other hazards

Substance meets the criteria for PBT according to regulation (EC) N° 1907/2006, Annex XIII. Not applicable
 Substance meets the criteria for vPvB according to regulation (EC) N° 1907/2006, Annex XIII. Not applicable
 Other hazards which do not result in classification: Dust contains respirable crystalline silica. Prolonged and or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable dust should be monitored and controlled. The product should be handled using methods and techniques that minimize or eliminate dust generation. The product contains less than 1 % w/w RCS (respirable crystalline silica) as determined by the SWERF method. The respirable crystalline silica content can be measured using the “Size-Weighted Respirable Fraction- SWERF” method. All details about the SWERF method is available at www.crystallinesilica.eu.

SECTION 3: Composition/information on ingredients

SUBSTANCE [] MIXTURE [X]

Substance/mixture: Multi constituent substance

Ingredient	EC No: Cas No:	R-Phrases	Concentration	Type
		CLP Hazard Statements		
Bauxite(*)	296-579-9 92797-42-7	Not classified	100%	[*]
		Not classified		
Aluminium Oxide(A)	215-691-6 1344-28-1	Not classified	>85%	[A]
		Not classified		
Quartz(SiO2)(B)	238-878-4 14808-60-7	Not classified	<10%	[B]
		Not classified		
Titanium oxide(B)	236-675-5 13463-67-7	Not classified	<5%	[B]
		Not classified		
Diiron trioxide(B)	215-168-2 1309-37-1	Not classified	<3%	[B]
		Not classified		

There are no additional ingredients present which, within the current knowledge are classified and contribute to the classification of the substance and hence require reporting in this section.

Other Information

None.

[*] Substance

[A] Constituent

[B] Impurity

Occupational exposure limits, if available, are listed in section 8.

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SECTION 4: First aid measures

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

4.1. Description of first aid measures

- In case of inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- In case of skin contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur wash skin with soap and water. or Rinse with water. In the event of a visible skin change or other complaints, seek medical advice (show label or SDS where possible).
- In case of eye contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for any to remove any contact lenses. Get medical attention if irritation occurs.
- In case of ingestion:** Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Self-protection of the first aider:** No action shall be taken involving any personal risk or without suitable training.

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

No known significant effects or critical hazard.

Over-exposure signs/symptoms

No specific data

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

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatment

No specific treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.
- Extinguishing media which must not be used for safety reasons** None known.

5.2. Special hazards arising from the substance or mixture

- Specific hazard** No specific hazard.

5.3. Advice for firefighters

- Special protective measures in fire** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action should be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk.
- Special equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in

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positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European Standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through split material. Avoid breathing dust. Put on appropriate personal protective equipment. No smoking.

For emergency responders:

If specialised clothing is required to deal with the spillage, take note of any information in section 8 on suitable or unsuitable materials. See also information in “for non-emergency personnel”.

6.2. Environmental precautions

Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways or air).

6.3. Methods and material for containment and cleaning up

Small spill:

Move containers from spill area. Vacuum or sweep up material and place in a designated labelled waste container. Dispose of via a licensed waste disposal contractor.

Large spill:

Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Vacuum or sweep up material and place in designated labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note see section 1 for emergency contact information and section 13 for waste disposal.

6.4. Reference to other sections

See section 1 for emergency contact information

See section 8 for information on appropriate personal protective equipment.

See section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions on safe handling

Put on appropriate personal protective equipment (see section 8). Avoid breathing dust. Avoid creating dusty conditions and prevent wind dispersal. Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in segregated and approved area. Store in original container and protect from direct sunlight in a dry, cool and well ventilated area away from incompatible materials (see section 10) and food and drink. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3. Specific end uses

No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ingredients with Occupational Exposure Limits (OEL)

Name	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3	OEL Note
Aluminium oxide				4(Resp.) 10(Inh.)	WEL
Titanium oxide				4(Resp) 10(Inh)	WEL

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Quartz				0.1(Resp)	WEL
Diiron trioxide				4(Resp) 10(Inh)	WEL

Recommended monitoring procedures: If this product ingredient with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

No DELs available

Predicted effect concentrations

No PECs available

8.2. Exposure controls

Engineering measures

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products before eating, smoking and using lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are closed to the workstation location.

Respiratory equipment

Use a properly fitted air-purifying or air feed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the safe respirator.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicated this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicated this is necessary.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure

Emissions from ventilation and work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state	Solid {powder, granular particles or aggregate}
Colour	Yellow/ Beige/ Grey

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Odour	Odourless
Melting point/freezing point	>2000°C
Relative density	>3.1g/cm ³
Solubility(ies)	Insoluble in water

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2. Chemical stability

The product is stable.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

No specific data.

10.5. Incompatible materials

Not applicable.

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

Name According to EEC	Oral LD50 (RAT)	Inhale LD50 (RAT)	Dermal LD50 (RBT)
Titanium dioxide	>60g/kg		

Sensitiser	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Cancerogenicity	No known significant effects or critical hazards.
Reproductive toxicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
STOT SE	Not available.
Aspiration hazard	Routes of entry anticipated. Oral, inhalation
Potential acute health effects	No known significant effects or critical hazards.
Symptoms related to the physical, chemical and toxicological characteristics	No known significant effects or critical hazards
Delayed and immediate effects and also chronic effects from short and long term exposure	Not available.
Potential chronic health effects	Not available

SECTION 12: Ecological information

12.1. Toxicity

Ingredient	Result	Species	Exposure
Titanium dioxide	Acute EC50 5.83mg/l Fresh water	Algae-Pseudokirchneriella Subantita-Exponential growth phases	72h
	Acute EC50>10mg/l Fresh water	Daphnia-Daphnia magna<24hours	48h
	Acute LC50 5.5ppm Fresh water	Daphnia-Daphnia magna-Juvenile (Fledging,hatchling,weanling)<24h	48h
	Acute LC50> 10mg/l Marine water	Fish-Fundulus heteroclitus	96h

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	Chronic NOEC 1 ppm Fresh water	Daphnia-Saphnia magna –Juvenile (Fledging,hatchling,weanling)<24h	48h
	Chronic NOEC 500ppm Fresh water	Daphnia-Saphnia magna –Juvenile (Fledging,hatchling,weanling)<24h	48h

Conclusion/summary: No known significant effects or critical hazards.

12.2. Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

No information.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Not applicable.

12.6. Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product

Methods of disposal:

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste:

Within the present knowledge of the supplier, this product is not regarded as Hazardous waste, as defined by EU Directive 91/689EEC.

Packaging

Methods of disposal:

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration of landfill should only be considered when recycling i.e., not feasible.

Special precautions:

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Not regulated and not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) n° 1907/2006 (REACH)

Annex XIV – List of substances subject to authorisation.

Substances of very high concern

None of the components are listed.

Annex XVII – Restrictions on the manufacture: Not applicable

Placing on the market and use of certain dangerous substances / mixtures.

Other EU regulations

Europe inventory:

All components are listed or exempt.

Blacklist Chemicals:

Not listed.

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Priority List Chemicals:	Not listed.
Integrated pollution prevention: and control list (IPPC)- Air	Not listed.
Integrated pollution prevention: and control list (IPPC)- Water	Not listed.
International regulations	
Chemical Weapons:	Not listed.
Convention List Schedule I Chemicals	
Chemical Weapons:	Not listed.
Convention List Schedule II Chemicals	
Chemical Weapons:	Not listed.
Convention List Schedule III Chemicals	

15.2. Chemical Safety assessment

Not applicable

15.3. Registration status

Exempt

SECTION 16: Other information

Risk Phrases in Full

Not classified

Hazard Statements in Full

Not classified

List of Wastes" Acronym & Abbreviation Key:

CLP Classification, Labelling & Packaging Regulation

EC European Commission

EU European Union

US United States

CAS Chemical Abstract Service

EINECS European Inventory of Existing Chemical Substances

REACH Registration, Evaluation, Authorization of Chemicals Regulation

GHS Globally Harmonized System of Classification and Labelling of Chemicals

LTEL Long term exposure limit

STEL Short term exposure limit

OEL Occupational exposure limit

ppm Parts per million

mg/m³ Milligrams per cubic meter

TLV Threshold Limit Value

ACGIH American Conference of Governmental Industrial Hygienists

OSHA Occupational Safety & Health Administration

PEL Permissible Exposure Limits

VOC Volatile organic compounds

g/l Grams per liter

mg/kg Milligrams per kilogram

N/A Not applicable

LD50 Lethal dose at 50%

LC50 Lethal concentration at 50%

EC50 Half maximal effective concentration

IC50 Half maximal inhibitory concentration

PBT Persistent bioaccumulative toxic chemical

vPvB Very persistent and very bioaccumulative

EEC European Economic Community

ADR International Transport of Dangerous Goods by Road

RID International Transport of Dangerous Goods by Rail

UN United Nations

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IMDG International Maritime Dangerous Goods Code

IATA International Air Transport Association

MARPOL International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978

IBC International Bulk Container

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