SAFETY DATA SHEET

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 HardMaster W615 Rapid Strength Flowable Concrete

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

Identified Uses Rapid Set Flowing Concrete.
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

1.4. Emergency Telephone Number

Emergency telephone +44 (0) 808 118 1922

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC) No: 1272/2008

Physical hazards Not Classified
Health hazards Skin Irrit. 2 - H315; Eye Dam. 1 - H318; Skin Sens. 1 - H317; STOT SE 3 - H335
Environmental hazards Not Classified

2.2. Label Elements

Hazard symbol

Signal word Danger
Hazard statement(s)
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
Precautionary statement(s)
P102 - Keep out of reach of children.
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.

	P333+P313 - If skin irritation or rash occurs: Get medical advice/ 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. P310 - Immediately call a POISON CENTER/ doctor. P501 - Dispose of contents/ container in accordance with national regulations.
Contains	Cement, portland, chemicals, Calcium dihydroxide, Dialuminium calcium tetraoxide, Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)
Supplementary precautionary statement(s)	P261 - Avoid breathing dust. P264 - Wash contaminated skin thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P362+P364 - Take off contaminated clothing and wash it before reuse. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER/ doctor if you feel unwell. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up.

2.3. Other hazards

Other hazards This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

3.2. Mixtures

	CAS No.	EC No.	REACH	Classification	Quantity
Calcium carbonate (Substance with National workplace exposure limits.)	471-34-1	207-439-9	-	Not Classified	10 - <25 %
Cement, portland, chemicals	65997-15-1	266-043-4	-	Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335	10 - <25 %
Calcium dihydroxide	1305-62-0	215-137-3	01-2119475151-45-XXXX	Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335	2.5 - <5%
Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)	12004-14-7	266-043-4	-	Skin Irrit. 2 - H315 Eye Dam. 1 - H318	2.5 - <5%
Dialuminium calcium tetraoxide	12042-68-1	234-931-0	-	Skin Irrit. 2 - H315 Eye Dam. 1 - H318	2.5 - <5%
Calcium [orthosilicato(4-)]dioxodialuminate(2-)	12252-33-4	235-490-7	-	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	2.5 - <5%
Crystalline Silica	1317-95-9	-	-	STOT RE 1 - H372	0.5 - <1%
Calcium dihydroxide	1305-62-0	215-137-3	-	Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335	0.025 - <0.25%

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

As a general rule, in case of doubt or if symptoms persist, always call a doctor.
NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention.
Skin contact	Brush off loose particles from skin. It is important to remove the substance from the skin immediately. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing
Eye contact	Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause irritation.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.

SECTION 5: Firefighting measures

(Flammable)
Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	None known.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after

	the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Avoid inhalation of dust and vapours. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Neutralise with acid. Caution. May generate heat. Following dilution and neutralisation, discharge to the sewer with plenty of water may be permitted. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions on safe handling

Usage precautions	Keep out of the reach of children. Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid handling which leads to dust formation. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store locked up. Store away from the following materials: Acids. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.
Storage class	Acid-reactive storage.

7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA)	WEL 10 mg/m³ inhalable dust
Long-term exposure limit (8-hour TWA)	WEL 4 mg/m³ respirable dust

Calcium carbonate

Long-term exposure limit (8-hour TWA)	WEL 10 mg/m³ inhalable dust
Long-term exposure limit (8-hour TWA)	WEL 4 mg/m³ respirable dust

Cement, portland, chemicals

Long-term exposure limit (8-hour TWA)	WEL 10 mg/m³ inhalable dust
Long-term exposure limit (8-hour TWA)	WEL 4 mg/m³ respirable dust

Calcium dihydroxide

Long-term exposure limit (8-hour TWA)	WEL 5 mg/m³

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)

Long-term exposure limit (8-hour TWA)	WEL 2 mg/m³

Dialuminium calcium tetraoxide

Long-term exposure limit (8-hour TWA)	WEL 2 mg/m³

Calcium [orthosilicato(4-)]dioxodialuminate(2-)

Long-term exposure limit (8-hour TWA)	WEL 2 mg/m³

Crystalline Silica

Long-term exposure limit (8-hour TWA)	WEL 0.1 mg/m³ respirable dust

Calcium dihydroxide

Long-term exposure limit (8-hour TWA)	WEL 5 mg/m³

WEL = Workplace Exposure Limit

Calcium dihydroxide (CAS: 1305-62-0)

DNEL	Workers - Inhalation; Long term local effects: 1 mg/m³ Workers - Inhalation; Short term local effects: 4 mg/m³ General population - Inhalation; Long term local effects: 1 mg/m³ General population - Inhalation; Short term local effects: 4 mg/m³
PNEC	- Fresh water; 0.49 mg/l - Marine water; 0.32 mg/l - STP; 3 mg/l - Soil; 1080 mg/kg

Lithium carbonate (CAS: 554-13-2)

DNEL	Workers - Inhalation; Long term systemic effects: 10 mg/m³ Workers - Inhalation; Short term systemic effects: 30 mg/m³ Workers - Dermal; Long term systemic effects: 64.3 mg/kg/day Workers - Dermal; Short term systemic effects: 100 mg/kg/day General population - Inhalation; Long term systemic effects: 9.64 mg/m³ General population - Inhalation; Short term systemic effects: 28.92 mg/m³ General population - Dermal; Long term systemic effects: 64.3 mg/kg/day

	General population - Dermal; Short term systemic effects: 50 mg/kg/day General population - Oral; Long term systemic effects: 6.43 mg/kg/day General population - Oral; Short term systemic effects: 19.23 mg/kg/day³
PNEC	- Fresh water; 9 mg/l - Marine water; 0.9 mg/l - Intermittent release; 0.3 mg/l - STP; 122.2 mg/l - Sediment (Freshwater); 35.2 mg/kg - Sediment (Marinewater); 3.52 mg/kg - Soil; 1.76 mg/kg

Citric acid (CAS: 77-92-9)

PNEC	- Fresh water; 0.44 mg/l - Marine water; 0.044 mg/l - STP; 1000 mg/l - Sediment (Freshwater); 34.6 mg/kg - Sediment (Marinewater); 3.46 mg/kg - Soil; 33.1 mg/kg

Calcium dihydroxide (CAS: 1305-62-0)

DNEL	Workers - Inhalation; Long term local effects: 1 mg/m³ Workers - Inhalation; Short term local effects: 4 mg/m³ General population - Inhalation; Long term local effects: 1 mg/m³ General population - Inhalation; Short term local effects: 4 mg/m³
PNEC	- Fresh water; 0.49 mg/l - Marine water; 0.32 mg/l - STP; 3 mg/l - Soil; 1080 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate ventilation.
Eye/face protection	Avoid contact with eyes. Large Spillages: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
Hand protection	Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	May cause skin sensitisation or allergic reactions in sensitive individuals. Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygiene measures	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.
Respiratory protection	No specific recommendations. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.
Environmental exposure controls	Keep container tightly sealed when not in use. Avoid release to the environment.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Cement. Powder.
Colour	Various colours.
Odour	Slight.
Odour threshold	Not determined.
pH	≥ 11.5
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Bulk density	Not determined.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidizing.

9.2. Other information

Other information	No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions	No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid	Acid anhydrides. Acids. Phenols, cresols.

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Skin Irrit. 2 - H315 Causes skin irritation.

Serious eye damage/irritation	
Serious eye damage/irritation	Eye Dam. 1 - H318 Causes serious eye damage.
Respiratory sensitisation	
Respiratory sensitisation	Based on available data the classification criteria are not met.
Skin sensitisation	
Skin sensitisation	May cause skin sensitisation or allergic reactions in sensitive individuals.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.
Reproductive toxicity	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure	
STOT - single exposure	STOT SE 3 - H335 May cause respiratory irritation.
Target organs	Respiratory system, lungs
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
Aspiration hazard	
Aspiration hazard	Not relevant. Solid.
General information	Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause irritation.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	Respiratory system, lungs
Medical considerations	Skin disorders and allergies.

Calcium carbonate

Acute toxicity - oral	
Notes (oral LD_{50})	> 2000 mg/kg, Rat REACH dossier information.
Acute toxicity - dermal	
Notes (dermal LD_{50})	> 2000 mg/kg, Rat REACH dossier information.
Skin corrosion/irritation	
Animal data	Dose: 0.5 g, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Not irritating.
Serious eye damage/irritation	
Serious eye damage/irritation	Dose: 0.1 ml (61 mg), 72 hours, Rabbit REACH dossier information. Not irritating.
Skin sensitisation	
Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Not sensitising. REACH dossier information.
Germ cell mutagenicity	
Genotoxicity - in vitro	Chromosome aberration: Negative. REACH dossier information.
Reproductive toxicity	
Reproductive toxicity - fertility	Screening - NOEL 1000 mg/kg/day, Oral, Rat P REACH dossier information. No evidence of reproductive toxicity in animal studies.

Reproductive toxicity - development	Developmental toxicity: - NOAEC: > 1.25 %, Oral, Rat REACH dossier information.

Cement, portland, chemicals

Skin corrosion/irritation	
Animal data	Skin Irrit. 2 - H315 Causes skin irritation.
Serious eye damage/irritation	
Serious eye damage/irritation	Eye Dam. 1 - H318 Causes serious eye damage.
Skin sensitisation	
Skin sensitisation	Skin Sens. 1 - H317 May cause an allergic skin reaction.
Specific target organ toxicity - single exposure	
STOT - single exposure	STOT SE 3 - H335 May cause respiratory irritation.

Calcium dihydroxide

Acute toxicity - oral	
Notes (oral LD_{50})	LD_{50} : >2000 mg/kg, Oral, Rat REACH dossier information.
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	2,500.0
Species	Rabbit
Notes (dermal LD_{50})	REACH dossier information.
ATE dermal (mg/kg)	2,500.0
Skin corrosion/irritation	
Animal data	Dose: 0.5 g, 4 hours, Rabbit Erythema/eschar score: Well defined erythema (2). Oedema score: Very slight oedema - barely perceptible (1). REACH dossier information. Irritating.
Serious eye damage/irritation	
Serious eye damage/irritation	Causes serious eye irritation.
Germ cell mutagenicity	
Genotoxicity - in vitro	Chromosome aberration: Negative. REACH dossier information.
Carcinogenicity	
Carcinogenicity	NOAEL 21500 mg/kg/day, Oral, Rat REACH dossier information. Read across data. No evidence of carcinogenicity in animal studies.
Reproductive toxicity	
Reproductive toxicity - development	Developmental toxicity: - NOAEL: ≥ 440 mg/kg/day, Oral, Mouse REACH dossier information. Read across data. No evidence of reproductive toxicity in animal studies.
Specific target organ toxicity - single exposure	
STOT - single exposure	STOT SE 3 - H335 May cause respiratory irritation.
Target organs	Respiratory system, lungs

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)

Acute toxicity - oral	
Notes (oral LD_{50})	> 2000 mg/kg REACH dossier information.
Acute toxicity - dermal	
Notes (dermal LD_{50})	2000 mg/kg, Rat REACH dossier information.
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	LC_{50} > 3.26 mg/l, dust, Rat 4 hours REACH dossier information.
Skin corrosion/irritation	
Animal data	Skin Irrit. 2 - H315 Causes skin irritation.
Serious eye damage/irritation	
Serious eye damage/irritation	Dose: 0.1 g, 1 hour, Rabbit REACH dossier information. Eye Dam. 1 - H318 Causes serious eye damage.

Germ cell mutagenicity

Genotoxicity - in vitro	Chromosome aberration: Negative. REACH dossier information.
Genotoxicity - in vivo	DNA damage and/or repair: Negative. REACH dossier information.

Reproductive toxicity

Reproductive toxicity - fertility	Screening - NOAEL 790 mg/kg/day, Oral, Rat P, F1 REACH dossier information.
Reproductive toxicity - development	Maternal toxicity: - NOAEL: 1600 mg/kg, Oral, Mouse, Rat, Rabbit REACH dossier information.

Dialuminium calcium tetraoxide

Skin corrosion/irritation

Animal data	Skin Irrit. 2 - H315 Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation	Eye Dam. 1 - H318 Causes serious eye damage.

Calcium [orthosilicato(4-)]dioxodialuminate(2-)

Skin corrosion/irritation

Animal data	Skin Irrit. 2 - H315 Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation	Eye Irrit. 2 - H319 Causes serious eye irritation.

Crystalline Silica

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	STOT RE 1 - H372 Causes damage to organs through prolonged or repeated exposure if inhaled.

SECTION 12: Ecological information

Ecotoxicity	The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

12.1. Toxicity

Toxicity	Based on available data the classification criteria are not met.

Calcium carbonate

Toxicity	Aquatic toxicity is unlikely to occur. Based on available data the classification criteria are not met.
Acute toxicity - fish	LC_{50}, 96 hours: > 100 %, Onchorhynchus mykiss (Rainbow trout) NOEC, 96 hours: > 100 %, Onchorhynchus mykiss (Rainbow trout) REACH dossier information.
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 100 %, Daphnia magna NOEC, 48 hours: 100 %, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EC_{10}, 72 hours: > 14 mg/l, Desmodesmus subspicatus EC_{20}, 72 hours: > 14 mg/l, Desmodesmus subspicatus EC_{50}, 72 hours: > 14 mg/l, Desmodesmus subspicatus NOEC, 72 hours: 14 mg/l, Desmodesmus subspicatus REACH dossier information.
Acute toxicity - microorganisms	EC_{50}, 3 hours: > 1000 mg/l, Activated sludge NOEC, 3 hours: 1000 mg/l, Activated sludge REACH dossier information.

Cement, portland, chemicals

Toxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Calcium dihydroxide

Acute toxicity - fish	LC_{50}, 96 hours: 457 mg/l, Gasterosteus aculeatus (Three-spined stickleback) REACH dossier information.
Acute toxicity - aquatic invertebrates	LC_{50}, 96 hours: 158 mg/l, Crangon septemspinosa REACH dossier information.
Acute toxicity - aquatic plants	EC_{10}, 72 hours: 79.22 mg/l, Pseudokirchneriella subcapitata EC_{20}, 72 hours: 106.02 mg/l, Pseudokirchneriella subcapitata EC_{50}, 72 hours: 184.57 mg/l, Pseudokirchneriella subcapitata LOEC, 72 hours: 80 mg/l, Pseudokirchneriella subcapitata NOEC, 72 hours: 48 mg/l, Pseudokirchneriella subcapitata REACH dossier information.
Acute toxicity - microorganisms	EC_{20}, 3 hours: 229.2 mg/l, Activated sludge EC_{50}, 3 hours: 300.4 mg/l, Activated sludge REACH dossier information.
Acute toxicity - terrestrial	NOEC, 4 weeks: 2000 mg/kg, Eisenia Fetida (Earthworm) REACH dossier information.
Chronic toxicity - aquatic invertebrates	LC_{50}, 14 days: 53.1 mg/l, Crangon septemspinosa NOEC, 14 days: 32 mg/l, Crangon septemspinosa REACH dossier information.
Toxicity to soil	NOEC, 96 days: 4000 mg/kg, Soil EC_{50}, 28 days: > 12000 mg/kg, Soil REACH dossier information.
Toxicity to terrestrial plants	EC_{50}, 21 days: 5640 mg/kg, Allium porrum REACH dossier information.

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)

Toxicity	Aquatic toxicity is unlikely to occur. Based on available data the classification criteria are not met.
Acute toxicity - fish	LC_{50}, 96 hours: > 83 mg/l, Brachydanio rerio (Zebra Fish) REACH dossier information.
Acute toxicity - aquatic invertebrates	EC_{10}, 48 hours: 2.9 mg/l, Daphnia magna EC_{50}, 48 hours: 6.8 mg/l, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EC_{10}, 72 hours: 2.3 mg/l, Desmodesmus subspicatus EC_{50}, 72 hours: 47.4 mg/l, Desmodesmus subspicatus REACH dossier information.
Acute toxicity - microorganisms	NOEC, 3 hours: ≥ 100 mg/l, Activated sludge EC_{50}, 3 hours: > 100 mg/l, Activated sludge REACH dossier information.

Dialuminium calcium tetraoxide

Toxicity	Not regarded as dangerous for the environment.

Calcium [orthosilicato(4-)]dioxodialuminate(2-)

Toxicity	Not regarded as dangerous for the environment.

Crystalline Silica

Toxicity	No negative effects on the aquatic environment are known.

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Calcium carbonate

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)

Persistence and degradability The product contains inorganic substances which are not biodegradable.

Dialuminium calcium tetraoxide

Persistence and degradability The product contains inorganic substances which are not biodegradable.

Calcium [orthosilicato(4-)]dioxodialuminate(2-)

Persistence and degradability The product contains inorganic substances which are not biodegradable.

Crystalline Silica

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

Calcium carbonate

Bioaccumulative potential No data available on bioaccumulation.

Calcium dihydroxide

Bioaccumulative potential The product is not bioaccumulating.

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)

Bioaccumulative potential BCF: 215, Salvelinus fontinalis (brook trout) REACH dossier information.

Dialuminium calcium tetraoxide

Bioaccumulative potential No data available on bioaccumulation.

Calcium [orthosilicato(4-)]dioxodialuminate(2-)

Bioaccumulative potential No data available on bioaccumulation.

Crystalline Silica

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility No data available.

Calcium carbonate

Mobility The product is soluble in water.

Cement, portland, chemicals

Mobility No information available.

Calcium dihydroxide

Mobility The product is soluble in water.

Surface tension 72 mN/m @ 20°C REACH dossier information.

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)

Mobility No data available.

Dialuminium calcium tetraoxide

Mobility No data available.

Calcium [orthosilicato(4-)]dioxodialuminate(2-)

Mobility No data available.

Crystalline Silica

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Calcium carbonate

Results of PBT and vPvB assessment Substance is inorganic. Not relevant.

Calcium dihydroxide

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Hexacalcium hexaoxotris[sulphato(2-)]dialuminate(12-)

Results of PBT and vPvB assessment Substance is inorganic. Not relevant.

Dialuminium calcium tetraoxide

Results of PBT and vPvB assessment Substance is inorganic. Not relevant.

Calcium [orthosilicato(4-)]dioxodialuminate(2-)

Results of PBT and vPvB assessment Substance is inorganic. Not relevant.

Crystalline Silica

Results of PBT and vPvB assessment Substance is inorganic. Not relevant.

12.6. Other adverse effects

Other adverse effects None known.

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

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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 (ADR 2013 - IMDG 2012 - ICAO/IATA 2014).

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number	
UN Number	Not applicable.
14.2. UN proper shipping name	
UN proper shipping name	Not applicable.
14.3. Transport hazard class(es)	
Hazard class	No transport warning sign required.
14.4. Packing group	
Packing group	Not applicable.
14.5. Environmental hazards	
Environmentally hazardous substance/marine pollutant	No.
14.6. Special precautions for user	
Special precaution	Not applicable.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture	
National regulations	EH40/2005 Workplace exposure limits.
EU legislation	Regulation (EC) 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) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Restrictions (Title VIII Regulation 1907/2006)	Entry number: 47
15.2. Chemical safety assessment	
Chemical safety assessment	No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008	Skin Irrit. 2 - H315, Eye Dam. 1 - H318, Skin Sens. 1 - H317, STOT SE 3 - H335: Calculation method.
Training advice	Read and follow manufacturer's recommendations.
Hazard statements in full	H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H372 - Causes damage to organs through prolonged or repeated exposure if inhaled.

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.