Bartoline 1876 Exterior Masonry Filler

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by UK REACH Regulations SI 2019/758
Issue date: 30/07/2024 Version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	Bartoline 1876 Exterior Masonry Filler
UFI	:	PF10-X0E8-200U-9J25
Product code	:	4728
Product group	:	End product

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

1.2.1. Relevant identified uses

Use of the substance/mixture	:	Exterior filler powder

1.2.2. Uses advised against

Restrictions on use	:	Cosmetics, personal care products

1.3. Details of the supplier of the safety data sheet

GB Manufacturer
Bartoline Limited
Barmston Close
HU17 0LW Beverley
United Kingdom
T 01482 678710 - F 01482 872606
info@bartoline.co.uk - www.bartoline.co.uk

1.4. Emergency telephone number

Emergency number	:	+44(0)1482 678710 8.30am - 4.45pm Monday to Friday (BST during DST, otherwise GMT) NHS 111 - General Public (24 Hour service)

Also, in the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS05 GHS07

Signal word (CLP) : Danger

Contains : Cement, portland, chemicals, Flue dust, portland cement

Hazard statements (CLP) : H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P261 - Avoid breathing dust.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective clothing, eye protection, face protection, protective gloves..
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 or doctor.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Extra Labelling Phrases : This product contains less than 0.0002% soluble Cr (VI).

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Quartz (SiO2) (Substance with a EU & UK community workplace exposure limit)	CAS-No.: 14808-60-7 EC-No.: 238-878-4	< 50	Not classified
Cement, portland, chemicals	CAS-No.: 65997-15-1 EC-No.: 266-043-4	25 – < 50	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 3, H335
Cement, alumina, chemicals (Substance related to UK community workplace exposure limit)	CAS-No.: 65997-16-2 EC-No.: 266-045-5	10 - 20	Not classified
Dolomite (Substance related to UK community workplace exposure limit)	CAS-No.: 16389-88-1 EC-No.: 240-440-2	10 – < 15	Not classified
Flue dust, portland cement	CAS-No.: 68475-76-3 EC-No.: 270-659-9	1 – < 5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminium oxide (substance with a UK workplace community limit)	CAS-No.: 1344-28-1 EC-No.: 215-691-6	1 – < 5	Not classified
Diiron trioxide (substance with a UK workplace community limit)	CAS-No.: 1309-37-1 EC-No.: 215-168-2	0.1 - < 1	Not classified
SULFUROUS ACID, SODIUM SALT (1:1), POLYMER WITH FORMALDEHYDE AND 1,3,5-TRIAZINE-2,4,6-TRIAMINE (Substance related to UK community workplace exposure limit)	CAS-No.: 64787-97-9 EC-No.: 613-691-4	0.1 - < 1	Not classified

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove victim to uncontaminated area. Call a physician if symptoms occur. Call a physician if irritation persists.

First-aid measures after skin contact : Brush off loose particles from skin. Wash immediately with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. Seek medical attention if irritation develops. Seek medical attention if burns develop.

First-aid measures after eye contact : Do not rub eye. Remove any contact lenses and open eyelids wide apart. Immediately flush eyes thoroughly with water for at least 15 minutes. Protect uninjured eye. Get medical advice/attention.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). If the person is fully conscious, make him/her drink water. Never give an unconscious person anything to drink. Get immediate medical advice/attention.

self-protection of the first aider : Wear recommended personal protective equipment (For further information refer to section 8: "Exposure controls/personal protection") if contact/exposure with the product is likely. First aid workers should avoid contact with wet mixtures containing cements due to the alkaline nature.

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

Symptoms/effects : The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Symptoms/effects after inhalation : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Symptoms/effects after skin contact : May cause irritation to skin. Prolonged or repeated contact with the skin may cause dermatitis. Repeated exposure may cause skin dryness or cracking. Repeated or prolonged skin contact may cause irritation progressing to a burn. May cause severe burns.

Symptoms/effects after eye contact : Causes severe eye damage - eyes to water, redness, pain, blurred vision. Risk of irreversible effects.

Symptoms/effects after ingestion : May cause stomach cramps and vomiting. Rednesses. Sore throat.

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

Speed is essential, burns may not be apparent immediately. When contacting a medical professional, take this SDS with you

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : The product is non-combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Above 600 °C, dolomite can decompose to calcium-magnesium oxide and carbon dioxide, Calcium-magnesium oxide releases heat when in contact with water, with the risk to fire surrounding flammable substances. The cement substances in the product are non-combustible and non-explosive and will not facilitate or sustain the combustion of other materials.

5.3. Advice for firefighters

Precautionary measures fire : Avoid breathing vapours from fire.

Firefighting instructions : For containers exposed to flames, cool laterally with water, even after the fire is extinguished. .

Protection during firefighting : Wear fire/flame resistant/retardant clothing. In confined space use self-contained breathing apparatus. Full face piece respirator. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incident.

Other information : Keep run-off water out of sewers and water sources. Containers close to fire should be removed or cooled with water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Keep unnecessary and unprotected personnel away from the spillage. Do not touch or walk on the spilled product. Wash thoroughly after dealing with a spillage.

Measures in case of dust release : Avoid inhalation of dust and contact with skin and eyes. Keep unnecessary and unprotected personnel away from the spillage.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment *i.e.* keep away from drains, surface and ground water. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body

6.3. Methods and material for containment and cleaning up

For containment : For uncured product, contain and collect as any liquid.For cured product, contain and collect as any solid. Stop leak if without risk. Move containers from spill area.

Methods for cleaning up : In general, clear up spills immediately and dispose of waste safely.
Collect the spillage in a dry state if possible. Dry Powder Use clean up methods such as vacuum clean-up or vacuum extraction (Industrial portable units, equipped with high efficiency air filters (EPA and HEPA filters, EN 1822-1:2009) or equivalent technique) which do not cause airborne dispersion. Never use compressed air. Alternatively, wipe-up the dust by mopping, wet brushing or by using water sprays or hoses (fine mist to avoid that the dust becomes airborne) and remove slurry. If not possible, remove by slurrying with water (see wet mixtures). When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear the appropriate personal protective equipment and prevent dust from spreading. Place spilled materials into a container. Solidify before disposal as described under Section 13. Wet Mixtures Scrape up wet mixtures and place in a container.

Other information : Allow material to dry and solidify before disposal as described under Section 13 Dispose of materials or solid residues at an authorized site – for further information on waste disposal, see Section 13 of SDS.

6.4. Reference to other sections

For further information on personal protection refer to section 8: "Exposure controls/personal protection". For further information on Disposal Consderations refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Avoid inhalation of dust and contact with skin and eyes. In order to avoid inhalation of dust, all sanding must be done wearing adequate respirator. Avoid spilling product and keep away from drains. Do not handle product together with Acids. ammonium salts. Aluminium and sodium carbonate solution due to incompatibility.
Hygiene measures	:	Do not eat, drink or smoke when using this product. After contact with skin, wash immediately and thoroughly with water and soap. Take off immediately all contaminated clothing and wash it before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	No special storage required. Avoid storage near Acids. ammonium salts. Aluminium (due to incompatibility). Avoid humid conditions.
Storage temperature	:	5 – 25 °C
Incompatible Products	:	Acids. ammonium salts. Aluminium.

7.3. Specific end use(s)

Main Use - Exterior filler powder. The exposure operational controls covers hand-mixing with intimate contact and only PPE available, e.g. mixture of powder into a hydrated mixture and subsequent application. Duration is not restricted (up to 480 minutes per shift, 5 shifts per week). Always follow on pack instructions when using this product. Avoid all contact with skin and eyes. DO NOT use in confined spaces or in areas of poor ventilation. Ensure adequate ventilation of work area and prevent build up of dust. If this is not possible then suitable extraction should be employed near to the emission point. When sanding cured product avoid prolonged inhalation of dust, if it is expected that sanding will be required for long period the use of a dust mask is recommended.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Quartz (SiO2) (14808-60-7)	
EU - Indicative Occupational Exposure Limit Value (IOEL) - Respirable crystalline silica dust	
IOEL TWA (8h) (Respirable fraction)	0.1 mg/m³ (Directive (EU) 2017/2398)
Republic of Ireland – Occupational Exposure Limit (OEL) - Respirable crystalline silica dust, (Cristobalite, Quartz, Tridymite, Tripoli)	
OEL 8h TWA	0.1 mg/m³ (Work involving exposure to respirable crystalline silica generated by a work process is listed as a carcinongenic process) (Chemical Agents and Carcinogens Code of Practice 2021)
United Kingdom – Occupational Exposure Limit (OEL) - Silica, respirable crystalline	
OEL 8h TWA (Respirable fraction)	0.1 mg/m³ (Capable of causing cancer and/or heritable genetic damage when generated as a work process) (EH40/2005 – 4th Edition 2020)

Cement, portland, chemicals (65997-15-1)	
Republic of Ireland – Occupational Exposure Limit (OEL)	
OEL 8h (respirable fraction)	1 mg/m³ (Chemical Agents and Carcinogens Code of Practice 2021)

Cement, portland, chemicals (65997-15-1)	
United Kingdom - Occupational Exposure Limit (OEL)	
OEL TWA (inhalable dust)	10 mg/m³ (EH40/2005 – 4th Edition 2020)
OEL TWA (respirable dust)	4 mg/m³ (EH40/2005 – 4th Edition 2020)

Cement, alumina, chemicals (65997-16-2)		
United Kingdom - Occupational Exposure Limits (OEL) - Dolomite (65997-15-1) Related to Dust		
OEL 8 h TWA	10 mg/m³ (Inhalable dust)	(EH40/2005 – 4th Edition 2020)
OEL 8 h TWA	4 mg/m³ (Respirable dust)	(EH40/2005 – 4th Edition 2020)

Dolomite (16389-88-1)		
United Kingdom - Occupational Exposure Limits (OEL) - Dolomite (16389-88-1) Related to Dust		
OEL 8 h TWA	10 mg/m³ (Inhalable dust)	(EH40/2005 – 4th Edition 2020)
OEL 8 h TWA	4 mg/m³ (Respirable dust)	(EH40/2005 – 4th Edition 2020)

Aluminium oxide (1344-28-1)	
Republic of Ireland – Occupational Exposure Limit (OEL) - Aluminium oxides	
OEL 8h TWA (inhalable dust)	10 mg/m³ (Chemical Agents and Carcinogens Code of Practice 2021)
OEL 8h TWA (respirable dust)	4 mg/m³ (Chemical Agents and Carcinogens Code of Practice 2021)
United Kingdom – Occupational Exposure Limit (OEL) - Aluminium oxides	
OEL 8h TWA (inhalable dust)	10 mg/m³ (EH40/2005 – 4th Edition 2020)
OEL 8h TWA (respirable dust)	4 mg/m³ (EH40/2005 – 4th Edition 2020)

Diiron trioxide (1309-37-1)	
Republic of Ireland – Occupational Exposure Limit (OEL) - Iron oxide, fume (as Fe)	
OEL 8h TWA	5 mg/m³ (Chemical Agents and Carcinogens Code of Practice 2021)
OEL STEL (15 min)	10 mg/m³ (Chemical Agents and Carcinogens Code of Practice 2021)
United Kingdom – Occupational Exposure Limit (OEL) - Iron oxide, fume (as Fe)	
OEL 8h TWA	5 mg/m³ (EH40/2005 – 4th Edition 2020)
OEL STEL (15 min)	10 mg/m³ (EH40/2005 – 4th Edition 2020)

SULFUROUS ACID, SODIUM SALT (1:1), POLYMER WITH FORMALDEHYDE AND 1,3,5-TRIAZINE-2,4,6-TRIAMINE (64787-97-9)		
United Kingdom - Occupational Exposure Limits (OEL) - SULFUROUS ACID, SODIUM SALT (1:1), POLYMER WITH FORMALDEHYDE AND 1,3,5-TRIAZINE-2,4,6-TRIAMINE (16389-88-1) Related to Dust		
OEL 8 h TWA	10 mg/m³ (Inhalable dust)	(EH40/2005 – 4th Edition 2020)
OEL 8 h TWA	4 mg/m³ (Respirable dust)	(EH40/2005 – 4th Edition 2020)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Flue dust, portland cement (68475-76-3)	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	0.84 mg/m³
Short-term - local effects, inhalation	4 mg/m³
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	0.84 mg/m³
Short-term - local effects, inhalation	4 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	282 µg/l
PNEC aqua (marine water)	28 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	875 µg/kg dwt
PNEC sediment (marine water)	88 µg/kg dwt
PNEC (Soil)	
PNEC soil	5 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	6 mg/l

Aluminium oxide (1344-28-1)	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	3 mg/m³
Long-term - systemic effects, inhalation	3 mg/m³
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	0.75 mg/m³
Long-term - systemic effects, inhalation	0.75 mg/m³
Long-term - systemic effects, oral	1.32 mg/kg bodyweight/day

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure adequate ventilation, especially in confined areas. Provide adequate ventilation to minimize dust concentrations. Mechanical ventilation is recommended.

8.2.2. Personal protection equipment

Personal protective equipment:
Do not attempt to take action without suitable protective equipment.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Use eye protection according to EN 166, designed to protect against powders and dusts.	Dust	Dust-tight	EN 166

8.2.2.2. Skin protection

Hand protection:
To protect hands from chemicals, gloves should comply with European Standard EN374. Use watertight, alkali resistant gloves (e.g. Nitrile coated gloves) internally lined with cotton - a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. Also recommended thickness of glove material >0.5 mm.

Other skin protection

Materials for protective clothing:
Not required for normal conditions of use

8.2.2.3. Respiratory protection

Respiratory protection:
When a person is potentially exposed to dust levels above exposure limits, use appropriate respiratory protection. The type of respiratory protection should be adapted to the dust level and conform to the relevant EN standard. In most cases a particulate dust mask type P1, P2 or P3 will be suitable. The protection provided by any respirator relies on a tight face seal and will not provide the required protection unless they fit the contours of the face properly and securely. The employer and self-employed persons have legal responsibilities for the maintenance and issue of respiratory protective devices and the management of their correct use in the workplace. Therefore, they should define and document a suitable policy for a respiratory protective device programme including training of the workers.

8.2.2.4. Thermal hazards

Thermal hazard protection:
Not applicable.

8.2.3. Environmental exposure controls

Environmental exposure controls:
Assure that emissions are compliant with all applicable air pollution control regulations. Do not exceed the occupational exposure limits (OEL). Do not allow into drains or water courses. Keep container closed when not in use.

Other information:
Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	Grey.
Appearance	:	Powder.
Odour	:	No characteristic odour
Odour threshold	:	Not applicable.
Melting point/Freezing Point	:	> 1250 °C Portland Cement
Initial boiling point and range	:	Not applicable.
Flammability (solid, gas)	:	Not available
Upper/lower flammability or explosive limits	:	Not applicable
Flash point	:	Not applicable.

Auto-ignition temperature	:	Not applicable.(no pyrophoricity – no organo-metallic, organo-metalloid or organo-phosphine bindings or of their derivatives, and no other pyrophoric constituent in the composition)
Decomposition temperature	:	Not applicable.
pH	:	11.5 – 12.5 (83% - Mix ratio 380g powder to 80g water)
Viscosity, kinematic	:	Not applicable
Viscosity	:	Dynamic Viscosity 2400 – 4400 mPa·s (Lamy MS-R4) (83% - Mix ratio 380g powder to 80g water)
Solubility(ies)	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not applicable.
Vapour pressure at 50 °C	:	Not available
Density	:	Not available
Relative density	:	Not available
Vapour Density	:	Not applicable.
Particle characteristics	:	Not available
Explosive properties	:	Not explosive.
Oxidising properties	:	Not oxidising.
Evaporation Rate	:	Not applicable

9.2. Other information

VOC content	:	Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no known reactivity hazards associated with this product when used under normal conditions.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

No hazardous reactions known under normal conditions of use. Due to the presence of the dolomite - sodium carbonate solution (mixing with an aqueous solution of sodium carbonate may result in the formation of carbon dioxide), however hazardous situation would only arise if in confided space/poor ventilated area. Reaction with Aluminium may lead to the production of flammable hydrogen gas, giving rise to a hazardous situation.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Humid conditions during storage may cause lump formation and loss of product quality.

10.5. Incompatible materials

Acids. ammonium salts. Aluminium (due to production of hydrogen), Sodium carbonate solution (due to the presence of dolomite)

10.6. Hazardous decomposition products

Does not decompose when used for intended uses. Above 600 °C, dolomite can decompose to calcium-magnesium oxide and carbon dioxide, Calcium-magnesium oxide releases heat when in contact with water.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

Cement, portland, chemicals (65997-15-1)	
LD50 dermal	> 2000 mg/kg bodyweight Animal: rabbit, Reference: Observations on the effects of skin irritation caused by cement, Kietzman et al, Dermatosen, 47, 5, 184-189 (1999)

Cement, alumina, chemicals (65997-16-2)	
LD50 oral	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)

Dolomite (16389-88-1)	
LD50 oral	> 5000 mg/kg bodyweight Animal: rat

Flue dust, portland cement (68475-76-3)	
LD50 dermal	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation (dust/mist)	> 6.04 mg/l Animal: rat, Duration of Exposure: 4h, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)

Aluminium oxide (1344-28-1)	
LD50 oral	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

Diiron trioxide (1309-37-1)	
LD50 oral	> 10,000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 inhalation (dust/mist)	> 5.05 mg/l bodyweight Animal: rat,Duration of exposure: 4h, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Based on available data, the classification criteria are not met
pH: 11.5 – 12.5 Mix ratio 380g powder to 80g water

Cement, portland, chemicals (65997-15-1)
Causes skin irritation. Based on human experience: Cement in contact with wet skin may cause thickening, cracking or fissuring of the skin. Prolonged contact in combination with abrasion may cause severe burns. Reference: Observations on the effects of skin irritation caused by cement, Kietzman et al, Dermatosen, 47, 5, 184-189 (1999))

Flue dust, portland cement (68475-76-3)
Positive Result, concluded to be skin irritating, in-vitro method, Guideline: reconstructed human epidermis (RHE) test method

Serious eye damage/irritation : Based on available data, the classification criteria are not met
pH: 11.5 – 12.5 Mix ratio 380g powder to 80g water

Cement, portland, chemicals (65997-15-1)
Portland cement caused a mixed picture of corneal effects and the calculated irritation index was 128. Direct contact by larger amounts of dry cement or splashes of wet cement may cause effects ranging from moderate eye irritation (e.g. conjunctivitis or blepharitis) to chemical burns and blindness. Reference: TNO report V8815/09, Evaluation of eye irritation potential of cement clinker G in vitro using the isolated chicken eye test, April 2010) and TNO report V8815/10, Evaluation of eye irritation potential of cement clinker W in vitro using the isolated chicken eye test, April 2010.

Flue dust, portland cement (68475-76-3)
Positive Result, calculated irritant index > 140 after 30 second application – severe cornea observed , *in-vitro* method, Guideline: Isolated ChickenEye (ICE) test

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Cement, portland, chemicals (65997-15-1)
May cause an allergic skin reaction. Cement eczema may be caused either by exposure to wet cement and high pH which induces irritant contact dermatitis, or by an immunological reaction to chromium which elicits allergic contact dermatitis. The observed eczema in many patients is a combination of these two mechanisms. Reference: Epidemiological assessment of the occurrence of allergic dermatitis in workers in the construction industry related to the content of Cr (VI) in cement, NIOH, Page 11, 2003. https://stami.brage.unit.no/stami-xmlui/bitstream/handle/11250/288424/stamirapporter_49.pdf?sequence=1 However this substance in the product and the product contains less than 2ppm of soluble chromium (VI).

Flue dust, portland cement (68475-76-3)
May cause an allergic skin reaction. (Read Across from Cement, portland, chemicals (65997-15-1))

Germ cell mutagenicity : Based on available data, the classification criteria are not met
Carcinogenicity : Based on available data, the classification criteria are not met
Reproductive toxicity : Based on available data, the classification criteria are not met
STOT-single exposure : May cause respiratory irritation.

Cement, portland, chemicals (65997-15-1)
May cause respiratory irritation Cement dust may irritate the throat and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposures in excess of occupational exposure limits. Overall, the pattern of evidence clearly indicates that occupational exposure to cement dust has produced deficits in respiratory function. However, evidence available at the present time is insufficient to establish with any confidence the dose-response relationship for these effects. Reference: Portland cement Dust - Hazard assessment document EH75/7, UK Healthand Safety Executive, 2006. Available from: http://www.hse.gov.uk/pubns/web/portlandcement.pdf)

Flue dust, portland cement (68475-76-3)
May cause respiratory irritation. (Read Across from Cement, portland, chemicals (65997-15-1))

STOT-repeated exposure : Based on available data, the classification criteria are not met.
Aspiration hazard : Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1 Endocrine Disrupting Properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2 Other Information
No additional information available.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Based on available data, the classification criteria are not met.
Hazardous to the aquatic environment, long–term (chronic) : Based on available data, the classification criteria are not met.

Quartz (SiO2) (14808-60-7)	
LL50 96h - Fish (Read Across from AMORPHOUS SILICA (CAS No.: 112945-52-5))	> 10000 mg/l Test organisms (species): Danio rerio, Guideline: OECD Guideline 203, Reference: The acute toxicity of AEROSIL 200 to Brachydanio rerio (OECD guideline 203, 96 h). Unpublished report. Degussa AG – US-IT-No. 92-0140-DGO, TNO and The acute toxicity of ULTRASIL VN 3 to Brachydanio rerio (OECD guideline 203, 96 h). Unpublished report. Degussa AG – US-IT-No. 92-0140-DGO, TNO – both Cited in OECD SIDS Quartz (CAS No.: 14808-60-7), Cristobalite (CAS No.: 14464-46-1), Environment Canada and Health Canada, June 2013.

Quartz (SiO2) (14808-60-7)	
LL50 34h – Crustacea (Read Across from AMORPHOUS SILICA (CAS No.: 112945-52-5))	> 10000 mg/l Test organisms (species): Daphnia magna, , Guideline: OECD Guideline 202, Reference: The acute toxicity of AEROSIL 2000 to Daphnia magna (OECD guideline 202, 24 h). Unpublished report. Degussa AG – US-IT-No. 92-0139-DGO, TNO and The acute toxicity with ULTRASIL VN 3 and Daphnia magna (OECD guideline 202, 24 h). Unpublished report. Degussa AG – US-IT-No. 92-0162-DGO, TNO – both Cited in OECD SIDS Quartz (CAS No.: 14808-60-7), Cristobalite (CAS No.: 14464-46-1), Environment Canada and Health Canada, June 2013.

Cement, portland, chemicals (65997-15-1)
The product is not hazardous to the environment. Eco-toxicological tests with Portland cement on Daphnia magna and Selenastrum coli have shown little toxicological impact. Therefore LC50 and EC50 values could not be determined. References: U.S. EPA, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 3rd ed. EPA/600/7-91/002, Environmental Monitoring and Support Laboratory, U.S. EPA, Cincinnati, OH (1994a) and 4th ed. EPA-821-R-02-013, US EPA, office of water, Washington D.C.(2002). U.S. EPA, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 4th ed. EPA/600/4-90/027F, Environmental Monitoring and Support Laboratory, U.S. EPA, Cincinnati, OH (1993) and 5th ed. EPA-821-R-02-012, US EPA, office of water, Washington D.C.(2002). Environmental Impact of Construction and Repair Materials on Surface and Ground Waters. Summary of Methodology, Laboratory Results, and Model Development. NCHRP report 448, National Academy Press, Washington, D.C., 2001

Cement, alumina, chemicals (65997-16-2)	
LC50 96h - Fish	> 100 mg/l Test organisms (species): Danio rerio, Guideline: OECD Guideline 203 (Fish, Acute Toxicity Test)
EC50 48h - Crustacea	5.4 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) However, the toxicity of the substance can be attributed to the pH increase due to the addition of hydroxide ions; the calcium and aluminium ion concentrations are are too low to explain the effects. Hence The toxicity of CAHC depends considerably on the composition of the test waters, especially the buffer capacity of the water – hence in real aquatic departments, the toxicological endpoint would be expected to be much higher than 10 mg/L
EC50 72h - Algae	3.6 mg/l Test organisms (species): Desmodesmus subspicatus, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test) However, the toxicity of the substance can be attributed to the pH increase due to the addition of hydroxide ions; the calcium and aluminium ion concentrations are are too low to explain the effects. Hence The toxicity of CAHC depends considerably on the composition of the test waters, especially the buffer capacity of the water – hence in real aquatic departments, the toxicological endpoint would be expected to be much higher than 10 mg/L.
NOEC 72h - Algae	2.6 mg/l Test organisms (species): Desmodesmus subspicatus, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test) However, the toxicity of the substance can be attributed to the pH increase due to the addition of hydroxide ions; the calcium and aluminium ion concentrations are are too low to explain the effects. Hence The toxicity of CAHC depends considerably on the composition of the test waters, especially the buffer capacity of the water – hence in real aquatic departments, the toxicological endpoint would be expected to be much higher than 10 mg/L

Flue dust, portland cement (68475-76-3)	
LC50 96h - Fish	> 11.1 mg/l Test organisms (species): Danio rerio, Guideline: OECD Guideline 203 (Fish, Acute Toxicity Test)
EC50 48h - Crustacea	> 100 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
E_rL50 72h - Algae	22.4 mg/l Test organisms (species): Desmodesmus subspicatus, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)
NOEL 72h, Algae	6.25 mg/l Test organisms (species): Desmodesmus subspicatus, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)
EL10 21 d - Crustacea	~ 68.2 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 211 (Daphnia magna Reproduction Test)

Diiron trioxide (1309-37-1)	
LC50 96h - Fish	≥ 50000 mg/l Test organisms (species): Danio rerio, Guideline/Reference: Proposed procedure by the Federal Environmental Agency (Umweltbundesamt) for lethal effect on Zebrabaerbling, (May 1984), LC0, LC50, LC100, 48-96h
EC50 48h - Crustacea	> 100 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
EC50 72h - Algae	> 20 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 201 (Freshwater Alga and Cyanobacteria, Growth Inhibition Test), Reference: Nogueira V, Lopes I, Rocha-Santos TA, Rasteiro MG, Abrantes N, Gonçalves F, Soares AM, Duarte AC, Pereira R. Assessing the ecotoxicity of metal nano-oxides with potential for wastewater treatment. Environ Sci Pollut Res Int. 2015 Sep;22(17):13212-24. doi: 10.1007/s11356-015-4581-9. Epub 2015 May 5.
NOEC 72h - Algae	> 20 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 211 (Daphnia magna Reproduction Test), Reference: Nogueira V, Lopes I, Rocha-Santos TA, Rasteiro MG, Abrantes N, Gonçalves F, Soares AM, Duarte AC, Pereira R. Assessing the ecotoxicity of metal nano-oxides with potential for wastewater treatment. Environ Sci Pollut Res Int. 2015 Sep;22(17):13212-24. doi: 10.1007/s11356-015-4581-9. Epub 2015 May 5.
NOEC 21d - Crustacea	≥ 20 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test), Reference: Nogueira V, Lopes I, Rocha-Santos TA, Rasteiro MG, Abrantes N, Gonçalves F, Soares AM, Duarte AC, Pereira R. Assessing the ecotoxicity of metal nano-oxides with potential for wastewater treatment. Environ Sci Pollut Res Int. 2015 Sep;22(17):13212-24. doi: 10.1007/s11356-015-4581-9. Epub 2015 May 5.

12.2. Persistence and degradability

No additional information available on mixture

12.3. Bioaccumulative potential

No additional information available on mixture

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

12.6. Endocrine disrupting properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

No other adverse effects are known as of yet for this mixture or any substances contained in this mixture.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

This product is classified as Hazardous Waste as it is supplied.

For this product (unused product or dry spillage) in container, add small amounts of water to it, wait for it to dry and harden and then dipose accordingly (see below).

Waste generation should be avoided or minimised where possible. When handling waste, the safety precautions applying to handling of the product should be considered. Label the containers containing waste and remove from the area as soon as possible. Label the containers containing waste contaminated material and remove from the area as soon as possible.
Product disposal to sewer should be avoided, if possible, and only be carried out after treatment, and under relevant rules, e.g. Consent to Discharge. Where wastes undergo disposal, external recovery or treatment, it must comply with the requirements of environmental protection, waste disposal legislation and any local authority requirements. If wastes undergo incineration, they must be suitable for it at an approved facility.

Used packaging waste should be reused or recycled, if uncontaminated. Contaminated packaging should be cleaned on site, if appropriate facilities exist, including any relevant rules or permits, or offsite by a specialist provider. Contaminated packaging which cannot be safely cleaned must be treated in the same way as the product, and should only be disposed of as a last resort.

List of waste code is 08 04 09* - waste adhesives and sealants containing organic solvents or other hazardous substances. These codes have been assigned based on the actual composition of the product as supplied. Seek advice from a hazardous waste specialist for waste classification.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Inland waterway transport
Not applicable

Rail transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. GB/UK-Regulations

REACH Annex XVII (Restriction List)

The marketing and use of cement or cement-containing mixtures is subject to a restriction on the content of soluble Cr (VI) (REACH Annex XVII point 47 Chromium VI compounds):

1. Cement and cement-containing mixtures shall not be placed on the market, or used, if they contain, when hydrated, more than 2 mg/kg (0.0002 %) soluble chromium VI of the total dry weight of the cement.

2. If reducing agents are used, then without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of cement or cement-containing mixtures is visibly, legibly and indelibly marked with information on the packing date, as well as on the storage conditions and the storage period appropriate to maintaining the activity of the reducing agent and to keeping the content of soluble chromium VI below the limit indicated in paragraph 1.

3. By way of derogation, paragraphs 1 and 2 shall not apply to the placing on the market for, and use in, controlled closed and totally automated processes in which cement and cement-containing mixtures are handled solely by machines and in which there is no possibility of contact with the skin.

This product contains less than 0.0002% soluble Cr (VI)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the GB PIC list ((EU) No 649/2012 as amended by the Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc) (EU Exit) Regulations 2019 and 2020 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (The Persistent Organic Pollutants Regulations 2007 As Amended by UK Regulations S.I 2018/1405, S.I 2019/1099, S.I 2019/1340, S.I 2020/1358 and S.I 2022/1293)

Ozone Depleting Substances Regulation

Contains no substance(s) listed on the Ozone Depletion list (The Ozone-Depleting Substances Regulations 2015 As Amended by UK Regulations S.I 2019/281, S.I 2019/583, S.I 2020/304, S.I. 2020/1616, S.I 2021/1397 and S.I 2023/336 on substances that deplete the ozone layer)

The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012 (S.I 2012/1715)

VOC content : Not relevant.

Poisons and Explosive Precursors Regulations

Contains no substance(s) listed on the Poisons and Explosive Precursors Precursors list (The Poisons Act 1972 as amended by S.I 2015/968. The Control of Poisons and Explosives Precursors Regulations 2015 (S.I 2015/966) and The Control of Explosives Precursors and Poisons Regulations 2023 (S.I 2023/63) on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004 & 111/2005)

Contains no substance(s) listed on the Drug Precursors list ((EC) No 273/2004 and (EC) No 111/2005 as amended by the UK Regulations S.I 2019/742 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances).

15.2. Chemical safety assessment

No Chemical Safety Assessment has taken place for this mixture.

SECTION 16: Other information

Indication of changes:

Due to change of classification database the revision numbering has been reset. You should therefore look at the revision date rather than the revision number to ensure you have the most up to date version.

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Abbreviations and acronyms:	
a.i.	Active Ingredient
a.s.	Active Substance
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
bw	Bodyweight
ATP	Adaptation to Technical Progress
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CLP	The Classification, Labelling and Packaging
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer

Abbreviations and acronyms:	
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
M	M Factor
mg	Milligrams
NI	Northern Ireland
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
ROI	Republic of Ireland
SCL	Specific Classification Limit
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.:	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Key literature references and sources for data

- ECHA (European Chemicals Agency). http://echa.europa.eu/, - REACH disseminated dossiers of relevant substances included in Section 3
- Supplier's Safety documents
- NITE Chemical Risk Information Platform (NITE-CHRIP) - GHS Classification Guidance by the Japanese Government for substances included in Section 3.2 of SDS
- Observations on the effects of skin irritation caused by cement, Kietzman et al, Dermatosen, 47, 5, 184-189 (1999)
- TNO report V8815/09, Evaluation of eye irritation potential of cement clinker G in vitro using the isolated chicken eye test, April 2010)
- TNO report V8815/10, Evaluation of eye irritation potential of cement clinker W in vitro using the isolated chicken eye test, April 2010.
- Epidemiological assessment of the occurrence of allergic dermatitis in workers in the construction industry related to the content of Cr (VI) in cement, NIOH, Page 11, 2003. https://stami.brage.unit.no/stami-xmlui/bitstream/handle/11250/288424/stamirapporter_49.pdf?sequence=1
- Portland cement Dust - Hazard assessment document EH75/7, UK Healthand Safety Executive, 2006. Available from: http://www.hse.gov.uk/pubns/web/portlandcement.pdf)
- The acute toxicity of AEROSIL 200 to Brachydanio rerio (OECD guideline 203, 96 h). Unpublished report. Degussa AG – US-IT-No. 92-0140-DGO, TNO – Cited in OECD SIDS Quartz (CAS No.: 14808-60-7), Cristobalite (CAS No.: 14464-46-1), Environment Canada and Health Canada, June 2013.

- The acute toxicity of ULTRASIL VN 3 to Brachydanio rerio (OECD guideline 203, 96 h). Unpublished report. Degussa AG – US-IT-No. 92-0140-DGO, TNO – Cited in OECD SIDS Quartz (CAS No.: 14808-60-7), Cristobalite (CAS No.: 14464-46-1), Environment Canada and Health Canada, June 2013.
- The acute toxicity of AEROSIL 2000 to Daphnia magna (OECD guideline 202, 24 h). Unpublished report. Degussa AG – US-IT-No. 92-0139-DGO, TNO – Cited in OECD SIDS Quartz (CAS No.: 14808-60-7), Cristobalite (CAS No.: 14464-46-1), Environment Canada and Health Canada, June 2013
- The acute toxicity with ULTRASIL VN 3 and Daphnia magna (OECD guideline 202, 24 h). Unpublished report. Degussa AG – US-IT-No. 92-0162- DGO, TNO –Cited in OECD SIDS Quartz (CAS No.: 14808-60-7), Cristobalite (CAS No.: 14464-46-1), Environment Canada and Health Canada, June 2013
- U.S. EPA, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 3rd ed. EPA/600/7-91/002, Environmental Monitoring and Support Laboratory, U.S. EPA, Cincinnati, OH (1994a) and 4th ed. EPA-821-R-02-013, US EPA, office of water, Washington D.C.(2002).
- U.S. EPA, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 4th ed. EPA/600/4-90/027F, Environmental Monitoring and Support Laboratory, U.S. EPA, Cincinnati, OH (1993) and 5th ed. EPA-821-R-02-012, US EPA, office of water, Washington D.C.(2002).
- Environmental Impact of Construction and Repair Materials on Surface and Ground Waters. Summary of Methodology, Laboratory Results, and Model Development. NCHRP report 448, National Academy Press, Washington, D.C., 2001
- Proposed procedure by the Federal Environmental Agency (Umweltbundesamt) for lethal effect on Zebrabaerbling, (May 1984), LC0, LC50, LC100, 48-96h.
- Nogueira V, Lopes I, Rocha-Santos TA, Rasteiro MG, Abrantes N, Gonçalves F, Soares AM, Duarte AC, Pereira R. Assessing the ecotoxicity of metal nano-oxides with potential for wastewater treatment. Environ Sci Pollut Res Int. 2015 Sep;22(17):13212-24. doi: 10.1007/s11356-015-4581-9. Epub 2015 May 5.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Calculation method
Eye Dam. 1, H318	Calculation method
STOT SE 3, H335	Calculation method

Safety Data Sheet (SDS), GB

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.