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

· **1.1 Product identifier**

· **Trade name:**

· ***STYRLEP 220***

· **Unique Formula Identifier (UFI-Code):**
5C60-D0WF-800G-STQ3
·

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

· **Product category**
PC9b Fillers, putties, plasters, modelling clay

· **Process category**
PROC11 Non industrial spraying
PROC19 Manual activities involving hand contact

· **Environmental release category**
ERC10a / ERC11a Widespread use of articles with low release

· **Article category**
AC4 Stone, plaster, cement, glass and ceramic articles

· **Application of the substance / the preparation**
Adhesive and reinforcement mortar - Product for an industrial, technical and private use for mixing with water and subsequent processing on buildings. For all other uses is advised against/ not recommended.
·

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

KREISEL - Technika Budowlana Sp. z o.o.
ul. Szarych Szeregów 23
60-462 Poznań
Poland

Tel. +48 (0)61 846 79 00
Fax +48 (0)61 846 79 09
poznan@kreisel.pl
kreisel.pl

· **Further information obtainable from:**
Bartosz Polaczyk (On working days 8 a.m. - 4 p.m.)
Tel.: +48(0)510 022 908, +48/(0)61 - 84 67 966, Bartosz.Polaczyk@kreisel.pl
Jarosław Białecki (On working days 8 a.m. - 4 p.m.)
Tel.: +48/(0)509 553 378, +48/(0)44 - 726 16 65, Jaroslaw.Bialecki@kreisel.pl
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· **1.4 Emergency telephone number**

National poisons information centre: +44/(0)171 - 635 9191
National Health Service: 111
European emergency call: 112

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

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.

· **Additional information:**
The classification in terms of skin and eye irritation is based on the results of animal studies, see section 16 literature [4], [11] and [12].

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS05 GHS07

· **Signal word**
Danger

· **Hazard-determining components of labelling:**
Portland cement clinker
Calcium dihydroxide

· **Hazard statements**
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

· **Precautionary statements**

P102	Keep out of reach of children.
P261	Avoid breathing dust.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P315	Get immediate medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

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P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P501 Dispose of contents/container to an authorised disposal firm or communal collection point.

· **2.3 Other hazards**

As soon as the dry mixture comes into contact with water or humidity, a strongly alkaline solution will be formed. Wet mortar may cause skin and eye irritation due to the high alkalinity. Especially with prolonged contact (e.g. knees in wet mortar) the risk of serious skin damage increases due to the alkalinity.

The part of respirable, cristaline siliciumdioxide amounts below 1%. The product ist no subject to a declaration obligation. However, the use of breathing protection is advisable.

Dust from the dry mixture can cause respiratory irritation. Frequent inhalation of large amounts of dust increases the risk of developing lung diseases.

The mixture is chromate reduced and therefore is no risk of sensitization by chromate. The ready to use form after addition of water contains in maximum 0,0002% of soluble chromium(VI) based on the dry weight of the cement. Proper dry storage and compliance with the maximum storage time is required for an effective chromate reduction.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterization: Substances**
This product is a mixture.

· **3.2 Chemical characterisation: Mixtures**

· **Description:**
Mixture of inorganic binders, fillers and nonhazardous additions

· **Dangerous components:**		
CAS: 65997-15-1 EINECS: 266-043-4 REACH: 02-2119682167-31*	Portland cement clinker Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	25 - 50%
CAS: 1305-62-0 EINECS: 215-137-3 REACH: 01-2119475151-45	Calcium dihydroxide Eye Dam. 1, H318; Skin Irrit. 2, H315; STOT SE 3, H335	2.5 - 10%
CAS: 14808-60-7 EINECS: 238-878-4 REACH: *	Silicon dioxide (quartz, <1% RCS) Substance with a Community workplace exposure limit	2.5 - 10%

· **Other components (>20%):**		
CAS: 1317-65-3 EINECS: 215-279-6 REACH: *	Limestone (Calcium carbonate)	50 - 100%

· **Additional information:**
For the wording of the listed hazard phrases refer to section 16.
* Not subject to registration in accordance with EC 1907/2006 Annex V (point 7) or Article 2.

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**

First aid

· **General information:**
For first responder no special personal protective equipment is required. First responder should avoid contact with the product.

· **After inhalation:**
Remove dust source and provide fresh air or bring the person in fresh air. If discomfort, cough or persistent irritation, seek medical attention.

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly. Immediately remove all soiled and contaminated clothing. Wash contaminated clothes before reuse. Clean contamionated shoes before reuse. If skin irritation continues, consult a doctor.

· **After eye contact:**
Do not rub eyes because additional damage to eyes can be caused by mechanical stress. If necessary, remove contact lenses and flush the eye immediately while holding eyelids open to water for at least 20 minutes. If possible, isotonic eyewash solution (e. g. 0,9% NaCl). Always consult an occupational physician or ophthalmologist.

· **After swallowing:**
Do not induce vomiting. If conscious rinse mouth with water and drink plenty of water. Consult a physician or poison control center.

· **4.2 Most important symptoms and effects, both acute and delayed**
Symptoms and effects are described in section 2 and 11.

Eye contact with the product may cause serious and potentially permanent damage.

The product in the dry state by prolonged contact can also have an irritant effect on moist skin. The contact with moist skin may cause skin irritation, dermatitis or other serious skin damage.

· **4.3 Indication of any immediate medical attention and special treatment needed**
If a physician is to be consulted, as per possibillity he should be presented this safety data sheet.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**
The mixture is flammable neither in the delivery condition not in mixed conditions. Extinguisher and fire fighting are therefore adjusted to the surrounding fire.

· **5.2 Special hazards arising from the substance or mixture**
This product is neither explosive nor flammable, and non-oxidizing with other materials. Inorganic dust can appear in case of fire. Avoid formation of dust. Reacts alkaline with water.

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· **5.3 Advice for firefighters**
No special measures required. Collect contaminated fire fighting water separately. It must not enter the sewage system. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust. Avoid inhalation, eye and skin contact. If appropriate, reference must be made to exposure controls and personal protection (see section 8).

· **6.2 Environmental precautions**
Do not allow product to reach water because an increase of pH may be caused. Ecotoxicological effects may occur when the pH-value is above 9. National regulations for waste water and groundwater are to be observed.

· **6.3 Methods and material for containment and cleaning up**
Collect spilled dry material dry and use if possible. Avoid formation of dust. For cleaning use at least industrial vacuum dust class M (DIN EN 60335-2-69). Do not dry sweep. Never use compressed air for cleaning. If, during a dry cleaning dust is formed, then it is necessary to use personal protective equipment. Avoid inhalation of emerging dust and contact with skin. Dispose of the material collected according to regulations.

Let the mixed mortar solidify and dispose of (see section 13.1).

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace. Prevent formation of dust. Avoid contact with the eyes and skin. Wear protective clothing. Washing facilities / Water for cleaning eyes and skin should be available. Persons, who tend to skin diseases or other hypersensitivity reactions of the skin, should not handle the product. Do not eat, drink, smoke or sniff while working.

Do not use products after the specified storage period any more, because the effect of the reducing agent contained decreases and the content of soluble chromium (VI) may exceed those limits mentioned in section 2.3. In these cases may develop an allergic Chromate dermatitis with prolonged contact due to the water-soluble chromate contained in the product.

· **Information about fire - and explosion protection:**
No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**
Keep out of reach of children. Store in cool, dry place in tightly closed receptacles. Do not use light alloy receptacles.

· **Information about storage in one common storage facility:**
Keep away from foodstuffs, beverages and feed.

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· **Further information about storage conditions:**
Store dry. Prevent ingress of water and moisture. Always keep in original container. Improper storage (ingress of moisture) or exceeding the maximum storage period, can subside the effect of contained chromate reducer (see section 7.1).

· **Miniumum storage life:**
Minimum storage life (story dry, up to 20°C): See indication on package.

· **Storage class:** 13

· **7.3 Specific end use(s)**
No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
65997-15-1 Portland cement clinker	
WEL (Great Britain)	Long-term value: 10* 4** mg/m³ *inhalable dust **respirable dust
AGW (Germany)	Long-term value: 5 E mg/m³ DFG
1305-62-0 Calcium dihydroxide	
WEL (Great Britain)	Long-term value: 5 mg/m³
IOELV (EU)	Short-term value: 4 mg/m³ Long-term value: 1 mg/m³ Respirable fraction
AGW (Germany)	Long-term value: 1E mg/m³ 2(I);Y, EU, DFG
REACH (Germany)	Short-term value: 4 A mg/m³ Long-term value: 1 A mg/m³ DFG 1/2003
TRGS 900 (Germany)	Long-term value: 1 E mg/m³ Y
14808-60-7 Silicon dioxide (quartz, <1% RCS)	
MAK (Germany)	Long-term value: 0.15 A mg/m³ alveolengängige Fraktion

· **DNELs**		
1305-62-0 Calcium dihydroxide		
Inhalative	DNEL Long term exposure	1 mg/m³ (Consumer) 1 mg/m³ (Workers)
	DNEL Short term exposure	4 mg/m³ (Consumer) 4 mg/m³ (Workers)

· **Additional Occupational Exposure Limit Values for possible hazards during processing:**	
Components with general dust limit	
MAK (TRGS 900) (Germany)	Short-term value: 2.5 A 20 E mg/m³ Long-term value: 1.25 A 10 E mg/m³ A - IFA 6068 (2003) E - IFA 7284 (2003)

· A - Alveoles passing particles E - Respirable particles (DIN EN 481)

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· **Additional information:**
The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **8.2.1. Personal protective equipment**

· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed. Remove contaminated clothing immediately and thoroughly clean it before using it again. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Do not eat, drink, smoke or sniff while working. Use skin protection cream for skin protection. Ensure that washing facilities are available at the work place.

· **Respiratory protection:**

Particle filtering half mask (FFP2 according to EN 149)

Compliance with the Occupational Exposure Limits is to be ensured through effective dust-technical measures, such as local exhaust ventilation. If there is a risk of exceeding the exposure limits, e. g. the open fiddling with the powdered dry product or during processing by splash, an appropriate respirator must be used.

· **Protection of hands:**

Hand protection: Chemical resistant protective gloves according EN 374

Wear waterproof, abrasion and alkali-resistant protective gloves with CE marking. leather gloves are not suitable on the basis of their water permeability and can release chromate-containing compounds.

· **Material of gloves:**
When preparing and processing the ready-mix, no chemical-resistant gloves (Cat. III) are necessary. Studies have shown that nitrilge-soaked cotton gloves (layer thickness about 0.15 mm) offer over a period of 480 min adequate protection. Change damp gloves. Keep gloves ready for change.

· **Penetration time of glove material:**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**
Nitrile rubber, NBR gloves
Recommended thickness of the material: ≥ 0,15mm

· **Not suitable are gloves made of the following materials:**
Leather gloves

· **Eye protection:**

In case of dust development or splash risk use tightly fitting safety goggles according to EN 166.

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· **Body protection:**

Wear closed long-sleeved clothing and tight shoes. If contact with fresh mortar is unavoidable, the protective clothing should also be waterproof. Make sure that no fresh mortar from above gets into the shoes or boots.

· **Risk management measures:**
An operator training/guidance in the correct use of personal protective equipment is necessary to ensure the required level of effectiveness.

· **8.2.2. Information about design of technical facilities**
For reduction of the dust formation, closed systems (e. g. silo with conveyor) local exhaust or other engineering controls such as plastering machines or continuous mixers with special additional equipment for dust detection should be used.

· **8.2.3. Limitation and supervision of exposure into the environment**
Do not allow product to reach water because an increase of pH may be caused. Ecotoxicological effects may occur when the pH-value is above 9. National regulations for waste water and groundwater are to be observed.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Powder
Colour:	Light grey
· **Odour:**	Odourless
· **Odour threshold:**	Not safety relevant
· **pH-value at 20 °C (68 °F):**	> 11 Saturated aqueous solution
· **Change in condition**	
Melting point/freezing point:	> 1,300 °C (> 33.8 °F)
Initial boiling point and boiling range:	Not applicable
· **Flash point:**	Not applicable
· **Flammability (solid, gas):**	Product is not flammable.
· **Ignition temperature:**	Not applicable
· **Decomposition temperature:**	>825°C to CaO and CO_2
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Oxidising properties:**	None
· **Explosive properties:**	Product does not present an explosion hazard.
· **Density:**	Not determined
· **Bulk density:**	1,400 - 1,600 kg/m³
· **Solubility in / Miscibility with**	
Water:	Slightly soluble
· **Solvent content:**	
VOC (EC)	0.0 g/l

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VOC (EC)	0.00 %
Solids content:	100.0 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity**
Reacts alkaline with water. A proposed reaction takes place in contact with water, during which the product hardens and forms a solid mass, which does not react with the environment.

· **10.2 Chemical stability:**
The product is stable as long as it is stored properly and dry.

· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions**
No dangerous reactions known (see 10.5).

· **10.4 Conditions to avoid**
Prevent entry of water and moisture during storage (the mixture reacts with moisture alkaline and hardens).

· **10.5 Incompatible materials**
Reacts exothermically with acids. The wet product is alkaline and reacts with acids, ammonium salts and base metals e.g. aluminum, zinc or brass. The reaction with base metals produces hydrogen.

· **10.6 Hazardous decomposition products**
No decomposition if used and stored according to specifications.

· **Miniumum storage life:**
Minimum storage life (story dry, up to 20°C): See indication on package.

· **Additional information:**
The mixture is chromate reduced. The ready for use preparation after addition of water contains in maximum 2 mg/kg dissolvable chrom(VI) related to the dry mass. Presupposition for the chromate reduction is the appropriate storage under consideration of the maximum storage life.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
The product was not investigated. The statement is derivated from the properties of the single components.

· **Acute toxicity:**
Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
1317-65-3 Limestone (Calcium carbonate)		
Oral	LD50	6,450 mg/kg (Rat) (RTECS Data)

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65997-15-1 Portland cement clinker		
Oral	LD50	> 2,000 mg/kg (Mouse) In animal studies with cement dust no acute toxicity was observed. On the basis of the available data, the classification criteria are not fulfilled.
Dermal	LD0 (no lethality)	2,000 mg/kg (Rabbit) (Limit test 24h [4]) On the basis of the available data, the classification criteria are not fulfilled.
Inhalative	LD0 (no lethality)	5 mg/m³ (Rat) (Limit test [10]) On the basis of the available data, the classification criteria are not fulfilled.
1305-62-0 Calcium dihydroxide		
Oral	LD50	7,340 mg/kg (Rat) (OECD 425) > 2,500 mg/kg (Rabbit) (OECD 402)
Dermal	LD50	> 2,500 mg/kg (Rabbit) (OECD 402)

·

· **Primary irritant effect:**

· **On the skin:**
Cement has a skin and mucous irritant effect. Dry cement in contact with moist skin or skin in contact with moist or wet cement may lead to different irritant and inflammatory skin reactions, e. g. As redness and cracking. Prolonged contact in combination with abrasion can cause serious skin damage, see section 16 literature [4].

Calcium dihydroxide is irritating to skin (in vivo, rabbit). As a result of studies of calcium dihydroxide is classified as irritating to skin (H315 - Causes skin irritation).
Causes skin irritation.

· **On the eye:**
In the in vitro test showed Portland cement clinker varying degrees of impact on the cornea. The calculated "irritation index" is 128. Direct contact with cement may lead by mechanical reaction, irritation and inflammation to corneal damage. Direct contact with larger amounts of dry or wet cement may cause effects ranging from moderate eye irritation to serious eye damage and blindness, see Section 16 References [11] and [12].

As a result of studies (in vivo, rabbit) calcium dihydroxide can cause serious eye damage (H318 - Causes serious eye damage).
Causes serious eye damage.

· **Sensitization:**
May cause an allergic skin reaction.

· **Subacute to chronic toxicity:**
Can cause serious skin damages in conjunction with skin-humidity at long term exposure.
The contact with wet cement may cause skin eczema on some individuals. This can be triggered either by the pH (irritant contact dermatitis) or by immunological reaction of water soluble chromium(VI) (allergic contact dermatitis), see section 16 literature [5] and [13].

· **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.

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· **Specific target organ toxicity - single exposure (STOT SE):**
Cement dust exposure may cause irritation of the respiratory system. Coughing, sneezing, and shortness of breath may be the result if exposure above the occupational exposure limit, see Section 16 References [1].
Calcium dihydroxide is irritating to the respiratory tract (STOT SE 3 / H335 - May cause respiratory irritation).
May cause respiratory irritation.

· **Specific target organ toxicity - repeated exposure (STOT RE):**
Long term exposure to respirable dust in excess of occupational exposure limit may result in coughing, shortness of breath and chronic obstructive changes in the respiratory tract. At low concentrations, no chronic effects were observed, see section 16 literature [17]. Based on the available data, the classification criteria are not fulfilled.
Cement may aggravate existing skin disorders, eye and respiratory tract, e. g. with emphysema or asthma.
Frequent inhalation of large amounts of dust increases the risk of developing lung diseases.

· **Aspiration hazard:**
Based on available data, the classification criteria are not met.

· **11.2 Practical experience**
No further relevant information available.

· **11.3 General comments**
See section 16 (literature and references).

SECTION 12: Ecological information

· **12.1 Toxicity**
The product was not investigated. The statement is derivated from the properties of the single components.

· **Aquatic toxicity:**	
1317-65-3 Limestone (Calcium carbonate)	
LC50 (96h)	> 100 mg/l (Rainbow trout - oncorhynchus mykis) (OECD 203)
LC50 (48h)	> 100 mg/l (Water flea - daphnia magma) (OECD 202)
EC50	> 14 mg/l (Algae - desmodesmus subspicatus) (OECD 201)
	> 1,000 mg/l (Activated sewage sludge) (OECD 209)
65997-15-1 Portland cement clinker	
LC50	mg/l (Water flea - daphnia magma) (low effect [6,8])
	mg/l (Algae - selenastrum coli) (low effect [7,8])
	mg/l (Sediments) (low effect [9])
1305-62-0 Calcium dihydroxide	
LC50 (96h Marine water)	457 mg/l (Fish)
	158 mg/l (Invertebrate)
LC50 (96h Freshwater)	33.884 mg/l (African catfish - clarias gariepinus)
	50.6 mg/l (Fish)
EC50 (48h)	49.1 mg/l (Invertebrate)
EC50 (72h)	184.57 mg/l (Algae)
NOEC (72h)	48 mg/l (Algae)
NOEC (14d)	32 mg/l (Invertebrate)

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NOEC (21d)	1,080 mg/kg (General plants)
NOEC (96h)	56 mg/l (Guppy - poecilia reticulata)
EC10/LC10 (NOEC)	12,000 mg/kg (Soil microorganisms)
	2,000 mg/kg (Soil macroorganisms)

· **12.2 Persistence and degradability**
Anorganic product, is not removable from water by biological cleaning process

· **12.3 Bioaccumulative potential**
Does not accumulate in organisms

· **12.4 Mobility in soil**
Slightly soluble

· **Ecotoxical effects:**
Only by increasing the pH value during application of large quantities.

· **Behaviour in sewage processing plants:**
No further relevant information available.

· **Type of test Effective concentration Method Assessment**
No further relevant information available.

· **Remark:**
Ecotoxicological tests with Portland cement on Daphnia magna (US EPA, 1994a, see Section 16 References [6]) and Selenastrum Coli (US EPA, 1993, see section 16 literature [7]) have shown little toxicological effect. Therefore, the LC50 and EC50 values could not be determined, see section 16 literature [8]. There were also no toxic effects on sediments are found, see section 16 literature [9]. The addition of large quantities of cement in water can cause a pH increase and thus be toxic to aquatic life under special circumstances.

· **Additional ecological information:**

· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

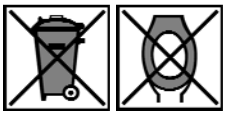
· **12.6 Other adverse effects**
No further relevant information available.

· **Literature**
See section 16 (literature and references).

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**



Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Gather dry, store in labeled containers and re-use if possible, taking into account the maximum storage time or mix residual amounts while avoiding any skin contact and exposure to dust with

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water. Moisture products or product slurry to harden and dispose of according to local regulatory regulations.

· **European waste catalogue**	
16 03 03*	Inorganic wastes containing hazardous substances
17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
15 01 01	Paper and cardboard packaging

.

16 03 03 for residual amounts of unprocessed product
17 09 04 for the water mixed and setted product
15 01 01 for the completely emptied packaging

· **13.2 Uncleaned packaging**

· **Recommendation:**
Disposal must be made according to official regulations.
Recycle only completely emptied packaging.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

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

· **Directive (EU) 2012/18**
· **Named dangerous substances - ANNEX I :**
None of the ingredients is listed.

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· **National regulations:**

· **Biozide ingredients (98/8/EG):**
Data based on recipe and information on the raw materials from the supply chain.

None of the ingredients is listed.

· **Waterhazard class:**
Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations:**

·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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

·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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

·Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

·Commission regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

·Regulation (EC) 1013/2006 on shipments of waste

·REACH Regulation EC 1907/2006 (REACH), Annex XVII No. 47 (chromium VI - compounds).

·Technical Rules for Hazardous Substances 900 - Workplace exposure limits (TRGS 900, Germany)

· **15.2 Chemical safety assessment**
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

· **Reasons for changes:**
* Data compared to the previous version altered.

· **Relevant phrases:**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

· **Advice for instructions:**
Additional trainings, which go beyond the prescribed training in activities involving hazardous substances are not required.

· **Literature and the data sources:**
[1] Portland Cement Dust-Hazard assessment document EH75/7, UK Health and Safety Executive, 2006: http://www.hse.gov.uk/pubns/web/portlandcement.pdf.

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[2] Technische Regel für Gefahrstoffe „Arbeitsplatzgrenzwerte“, 2009, GMBI Nr.29 S.605.
[3] MEASE 1.02.01 Exposure assessment tool for metals and inorganic substances, EBRC Consulting GmbH für Eurometaux, 2010
[4] Observations on the effects of skin irritation caused by cement, Kietzman et al, Dermatosen, 47, 5, 184-189 (1999).
[5] 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.
[6] 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).
[7] 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).
[8] 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.
[9] Final report Sediment Phase Toxicity Test Results with Corophium volutator for Portland clinker prepared for Norcem A.S. by AnalyCen Ecotox AS, 2007.
[10] TNO report V8801/02, An acute (4-hour) inhalation toxicity study with Portland Cement Clinker CLP/GHS 03-2010-fine in rats, August 2010.
[11] TNO report V8815/09, Evaluation of eye irritation potential of cement clinker G in vitro using the isolated chicken eye test, April 2010.
[12] TNO report V8815/10, Evaluation of eye irritation potential of cement clinker W in vitro using the isolated chicken eye test, April 2010.
[13] European Commission’s Scientific Committee on Toxicology, Ecotoxicology and the Environment (SCTEE) opinion of the risks to health from Cr (VI) in cement (European Commission, 2002): http://ec.europa.eu/health/archive/ph_risk/committees/sct/documents/out158_en.pdf.
[14] Investigation of the cytotoxic and proinflammatory effects of cement dusts in rat alveolar macrophages, Van Berlo et al, Chem. Res. Toxicol., 2009 Sept; 22(9):1548-58
[15] Cytotoxicity and genotoxicity of cement dusts in A549 human epithelial lung cells in vitro; Gminski et al, Abstract DGPT conference Mainz, 2008.
[16] Comments on a recommendation from the American Conference of governmental industrial Hygienists to change the threshold limit value for Portland cement, Patrick A. Hessel and John F. Gamble, EpiLung Consulting, June 2008.
[17] Prospective monitoring of exposure and lung function among cement workers, Interim report of the study after the data collection of Phase I-II 2006-2010, H. Notø, H. Kjuus, M. Skogstad and K.-C. Nordby, National Institute of Occupational Health, Oslo, Norway, March 2010.
[18] Anonymous, 2006: Tolerable upper intake levels for vitamins and minerals Scientific Committee on Food, European Food Safety Authority, ISBN: 92-9199-014-0 [SCF document]
[19] Anonymous, 2008: Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for calcium oxide (CaO) and calcium dihydroxide (Ca(OH)2), European Commission, DG Employment, Social Affairs and Equal Opportunities, SCOEL/SUM/137 February 2008

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· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
MAK: Maximale Arbeitsplatz-Konzentration (maximum concentration of a chemical substance in the workplace, Austria/ Germany)
PBT: persistent, bioaccumulative and toxic properties
vPvB: very persistent, bioaccumulatice properties

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ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Further information:**
The information in this safety data sheet describe the safety requirements of our product and is based on our current state of our knowledge. They provide no assurance of product quality. Existing laws, ordinances and regulations, including those that are not mentioned in this data sheet must be observed by the recipient of our products in their own responsibility.