

## EWI-060 MINERAL RENDER SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE COMPANY OR UNDERTAKING

#### 1.1 Product Identifier:

EWI-060 Mineral Render

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

Mineral, thin-layer render

#### Life cycle stages

C/PW Consumer use / Widespread use by professional workers

#### Sector of Use

SU19 Building and construction work

#### 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

Structural skim – Product for an industrial, technical and private use for coating building surfaces. For all other uses is advised against/ not recommended.

#### 1.3 Details of the supplier of the safety data sheet:

##### Manufacturer:

EWI Pro Insulation Systems Ltd  
Unit 1-2, King Georges Trading Estate, Davis Road, Chessington, England, KT9 1TT  
0800 133 7072  
info@ewipro.com  
technical@ewipro.com

##### Producer:

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#### 1.4 Emergency phone number:

Environment Agency Emergency Hotline: +44/(0)800 80 70 60

Emergency Services (UK): 999

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## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture:

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

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 Description of hazards:

#### Label elements

#### GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

#### Hazard pictograms

GHS05 GHS07



#### Signal word

Danger

#### Hazard-determining components of labelling:

Calcium dihydroxide

Portland cement clinker

#### 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.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P501 Dispose of contents/container in keeping with local and national regulations.

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#### 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:** This substance/mixture contains no components classified as persistent, bioaccumulative and toxic (PBT) at levels of 0.1% or higher.

**vPvB:** This substance/mixture contains no components classified as very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Chemical characterization: Substances

This product is a mixture.

#### Mixtures

##### Description:

Mixture of inorganic binders, fillers and non-hazardous additions

### 3.2 Hazardous Substances:

Dangerous components:		
CAS: 1317-65-3 EINECS: 215-279-6 REACH: <sup>1</sup>	Limestone (Calcium carbonate) Consisting of: 471-34-1 Calcium carbonate (> 90%); 16389-88-1 Calcium/Magesium carbonate (0 - 10%); 14808-60-7 Quartz (SiO <sub>2</sub> ) (0 - 10%); 37244-96-5 Feldspar (0 - 5%); 12001-26-2 Mica - Potassium aluminum silicate (Muscovite) (0 - 5%)	50 - < 100%
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 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 1% Eye Dam. 1; H318: C ≥ 1%	≥ 10 - < 20%
CAS: 14808-60-7 EINECS: 238-878-4 REACH: <sup>1</sup>	Silicon dioxide (< 1% RCS) Consisting of: 14808-60-7 Quartz (SiO <sub>2</sub> ); 14464-46-1 Cristobalite; 15468-32-3 Tridymite	10 - 25%
CAS: 65997-15-1 EINECS: 266-043-4 REACH: <sup>1</sup>	Portland cement clinker Consisting of: 12168-85-3 Tricalcium silicate (45 -70%); 10034-77-2 Dicalcium silicate (5 - 25%); 12042- 78-3 Tricalcium aluminate (0 - 10%); 12612-16-7 Calcium aluminate ferrite (0 - 10%) Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1B, H317; STOT SE 3, H335 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 1% Eye Dam. 1; H318: C ≥ 1%	5 - 10%

Revision:

Review Date:

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures:

#### 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 contaminated 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 centre.

### 4.2 Main symptoms and effects, acute and delayed:

#### 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 Indications for medical attention and special treatments to be administered immediately:

If a physician is to be consulted, as per possibility he should be presented this safety data sheet.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media:

#### Suitable extinguishing agents:

The mixture is flammable neither in the delivery condition not in mixed conditions. Extinguisher and firefighting are therefore adjusted to the surrounding fire.

### 5.2 Specific hazards arising from the 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.

### 5.3 Advice for firefighters:

No special measures required. Collect contaminated firefighting water separately. It must not enter the sewage system. Dispose of fire debris and contaminated firefighting water in accordance with official regulations.

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Review Date:



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## 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 Precautions for 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 wastewater and groundwater are to be observed.

### 6.3 Methods and material for containment and cleaning:

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 anymore, 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.

### 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.

#### 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).

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Review Date:



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**Minimum storage life:**

Minimum storage life (store dry, up to 20°C): See indication on package.

**Storage class:** 13

**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:	
<b>1317-65-3 Limestone (Calcium carbonate)</b>	
WEL (Great Britain)	Long-term value: 10* 4** mg/m <sup>3</sup> *inhalable dust; **respirable
<b>1305-62-0 Calcium dihydroxide</b>	
WEL (Great Britain)	Short-term value: 4* mg/m <sup>3</sup> Long-term value: 5 1* mg/m <sup>3</sup> *respirable fraction
IOELV (EU)	Short-term value: 4 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup> Respirable fraction
<b>14808-60-7 Silicon dioxide (&lt; 1% RCS)</b>	
BOELV (EU)	Long-term value: 0.1* mg/m <sup>3</sup> *respirable fraction
<b>65997-15-1 Portland cement clinker</b>	
WEL (Great Britain)	Long-term value: 10* 4** mg/m <sup>3</sup> *inhalable dust **respirable dust

DNELs		
<b>1305-62-0 Calcium dihydroxide</b>		
<b>Inhalative</b>	<b>Systemic – Long term exposure</b>	<b>1 mg/m<sup>3</sup> (Consumer)</b> <b>1 mg/m<sup>3</sup> (Employee)</b>
	<b>Systemic – Short term exposure</b>	<b>4 mg/m<sup>3</sup> (Consumer)</b> <b>4 mg/m<sup>3</sup> (Employee)</b>

**Ingredients with biological limit values:**

Void

Additional Occupational Exposure Limit Values for possible hazards during processing:	
<b>Components with general dust limit</b>	
MAK (Great Britain)	Long-term value: 4 a 10 e mg/m <sup>3</sup>
<b>14808-60-7 Quartz (SiO<sub>2</sub>)</b>	
BOELV (EU)	Long-term value: 0.1* mg/m <sup>3</sup> *respirable fraction

a – alveoles passing particles e – respirable particles (DIN EN 481)

**Additional information:**

The lists valid during the making were used as basis.

Revision:

Review Date:

## 8.2 Exposure controls:

### 8.2.1. Appropriate technical controls:

#### 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.

### 8.2.2. Individual protective measures, such as 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 workplace.

#### 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.

#### Hand protection:

Hand protection: Chemical resistant protective gloves according EN ISO 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 nitrile-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:

- Polychloroprene (material thickness  $\geq 0.5$  mm ; breakthrough time  $\geq 480$  min.)
- Nitrile rubber (material thickness  $\geq 0.35$  mm ; breakthrough time  $\geq 480$  min.)
- Butyl rubber (material thickness  $\geq 0.5$  mm ; breakthrough time  $\geq 480$  min.)
- Fluororubber (material thickness  $\geq 0.4$  mm ; breakthrough time  $\geq 480$  min.)
- Neoprene (material thickness  $\geq 0.5$  mm ; breakthrough time  $\geq 480$  min.)

#### Not suitable are gloves made of the following materials:

- Non-liquid-tight gloves made of fabric, leather or similar materials.

#### Eye/face protection:

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

#### 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.

### 8.2.3. Environmental exposure controls:

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

- ➔ Physical state: Solid
- ➔ Appearance:
- ➔ Form: Powder
- ➔ Colour: Different according to colouring
- ➔ Odour: Odourless
- ➔ Odour threshold: Not safety relevant
- ➔ pH at 20 °C (68 °F): > 11

#### Change in condition

- ➔ Melting point/freezing point: > 1,300 °C (> 34.300 °F) (ISO 3016)
- ➔ Boiling point or initial boiling point and boiling range: Not applicable
- ➔ Flammability: Product is not flammable.
- ➔ Flash point: Not applicable
- ➔ Auto-ignition temperature: Not applicable
- ➔ Decomposition temperature: > 825°C to CaO and CO<sub>2</sub>
- ➔ Oxidising properties: None
- ➔ Explosive properties: Product does not present an explosion hazard.
- ➔ Ignition temperature: Product is not self-igniting.

Density and/or relative density

- ➔ Density: Not determined
- ➔ Bulk density: 1,079 – 1,451 kg/m<sup>3</sup>

#### Particle size

#### Solubility

- ➔ Water: Slightly soluble
- ➔ Partition coefficient n-octanol/water (log value): Not determined
- ➔ Solids content: 100.0 %
- ➔ VOC without water (EC): 0.00 g/l
- ➔ VOC with water (EC): 0.00 g/l
- ➔ VOC with water (EC): 0.000 %

Revision:  
Review Date:



#### Other information

##### Information with regard to physical hazard classes

- ➔ Explosives: Void
- ➔ Flammable gases: Void
- ➔ Aerosols: Void
- ➔ Oxidising gases: Void
- ➔ Gases under pressure: Void
- ➔ Flammable liquids: Void
- ➔ Flammable solids: Void
- ➔ Self-reactive substances and mixtures: Void
- ➔ Pyrophoric liquids: Void
- ➔ Pyrophoric solids: Void
- ➔ Self-heating substances and mixtures: Void
- ➔ Substances and mixtures, which emit flammable gases in contact with water: Void
- ➔ Oxidising liquids: Void
- ➔ Oxidising solids: Void
- ➔ Organic peroxides: Void
- ➔ Corrosive to metals: Void
- ➔ Desensitised explosives: Void

## 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.

#### 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). No decomposition if used according to specifications.

#### 10.5 Incompatible materials:

Reacts exothermically with acids. The wet product is alkaline and reacts with acids, ammonium salts and base metals e.g. aluminium, zinc or brass. The reaction with base metals produces hydrogen.

Revision:

Review Date:



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#### 10.6 Hazardous decomposition products:

No decomposition if used and stored according to specifications.

#### 10.7 Minimum storage life:

Minimum storage life (store dry, up to 20°C): See indication on package.

#### 10.8 Additional information:

The mixture is chromate reduced. The ready for use preparation after addition of water contains in maximum 2 mg/kg dissolvable chromium (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

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

The product was not investigated. The statement is derived 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	LD <sub>50</sub>	6,450 mg/kg (Rat) (RTECS Data)
1305-62-0 Calcium dihydroxide		
Oral	LD <sub>50</sub>	7,340 mg/kg (Rat) (OECD 425) > 2,500 mg/kg (Rabbit) (OECD 402)
Dermal	LD <sub>50</sub>	> 2,500 mg/kg (Rabbit) (OECD 402)
14808-60-7 Silicon dioxide (< 1% RCS)		
Oral	LD <sub>50</sub>	> 5,000 mg/kg (Rat)
Dermal	LD <sub>50</sub>	> 5,000 mg/kg (Rat)
65997-15-1 Portland cement clinker		
Oral	LD <sub>50</sub>	> 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	LD <sub>0</sub> (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	LD <sub>0</sub> (no lethality)	5 mg/m <sup>3</sup> (Rat) (Limit test [10]) On the basis of the available data, the classification criteria are not fulfilled.

Other information (about experimental toxicology):		
14808-60-7 Silicon dioxide (< 1% RCS)		
Irritation of skin	OECD 404 (skin)	(Rabbit) not irritant
Irritation of eyes	OECD 405 (eye)	(Rabbit) not irritant
Sensitisation	OECD 429 (LLNA)	(Mouse) not sensitizing

Revision:

Review Date:



**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.

**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.

**Practical experience**

No further relevant information available.

**General comments**

See section 16 (literature and references).

**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].

**Information on other hazards****Endocrine disrupting properties**

None of the ingredients is listed.

Revision:

Review Date:

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity:

The product was not investigated. The statement is derived from the properties of the single components.

<b>Aquatic toxicity:</b>	
<b>1317-65-3 Limestone (Calcium carbonate)</b>	
LC <sub>50</sub> (96h)	> 100 mg/l (Rainbow trout - oncorhynchus mykiss) (OECD 203)
LC <sub>50</sub> (48h)	> 100 mg/l (Water flea - daphnia magna) (OECD 202)
EC <sub>50</sub>	> 14 mg/l (Algae - desmodesmus subspicatus) (OECD 201) > 1,000 mg/l (Activated sewage sludge) (OECD 209)
<b>1305-62-0 Calcium dihydroxide</b>	
LC <sub>50</sub> (96h Marine water)	457 mg/l (Fish) 158 mg/l (Invertebrate)
LC <sub>50</sub> (96h Freshwater)	33.884 mg/l (African catfish - clarias gariepinus) 50.6 mg/l (Fish)
EC <sub>50</sub> (48h)	49.1 mg/l (Invertebrate)
EC <sub>50</sub> (72h)	184.57 mg/l (Algae)
NOEC (72h)	48 mg/l (Algae)
NOEC (14d)	32 mg/l (Invertebrate)
NOEC (21d)	1,080 mg/kg (General plants)
NOEC (96h)	56 mg/l (Guppy - poecilia reticulata)
EC <sub>10</sub> /LC <sub>10</sub> (NOEC)	12,000 mg/kg (Soil microorganisms) 2,000 mg/kg (Soil macroorganisms)
<b>65997-15-1 Portland cement clinker</b>	
LC <sub>50</sub>	mg/l (Water flea - daphnia magna) (low effect [6,8]) mg/l (Algae - selenastrum coli) (low effect [7,8]) mg/l (Sediments) (low effect [9])

### 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 Soil mobility:

Slightly soluble

### 12.5 PBT and vPvB assessment results:

**PBT:** This substance/mixture contains no components classified as persistent, bioaccumulative and toxic (PBT) at levels of 0.1% or higher.

**vPvB:** This substance/mixture contains no components classified as very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

This substance/mixture does not contain components with endocrine disrupting properties

according to the criteria of Commission Delegated Regulation (EU) 2017/2100 or Commission

Regulation (EU) 2018/605 in concentrations of 0.1% or higher

### 12.7 Other adverse effects:

No further relevant information available.

Revision:

Review Date:

#### Literature

See section 16 (literature and references).

#### Ecotoxicological effects:

Only by increasing the pH value during application of large quantities.

#### Behaviour in sewage processing plants:

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:

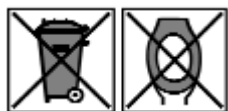
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## SECTION 13: DISPOSAL CONSIDERATION

#### Waste treatment methods

#### Recommendation:

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



Gather dry, store in labelled 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 water. Moisture products or product slurry to harden and dispose of according to local regulatory regulations.

Risk of environmental pollution. Follow the applicable regulations on waste disposal. Keep unused products and contaminated packaging sealed. Provide containers for waste collection. Hand over for disposal to a specialist company authorised to carry out such activities. Prevent the product from being released into the environment. Do not allow the product to enter the sewage system. Must not be disposed of with municipal waste. Empty containers can be utilised for energy recovery in a waste incineration plant or, if classified accordingly, collected at a landfill site. Perfectly cleaned packaging can be recycled.

Dispose of contents/container in accordance with local/regional/national/international 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
HP4	Irritant - skin irritation and eye damage

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

Revision:

Review Date:



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**Uncleaned packaging****Recommendation:**

Disposal must be made according to official regulations. Recycle only completely emptied packaging.

**SECTION 14: TRANSPORT INFORMATION****14.1. UN Number:**

Void

**14.2. Proper Shipping Name:**

Void

**14.3. Transport Hazard Class(es):**

Void

**14.4. Packing Group:**

Void

**14.5. Environmental Hazards:**

No

**14.6. Special Precautions for User:**

Not applicable

**14.7. Transport in Bulk According to MARPOL Annex II and the IBC Code:**

Not applicable

**14.8 UN 'Model Regulation'**

Void

**SECTION 15: REGULATORY INFORMATION****15.1 Regulations and legislation on health, safety, and environment specific to the mixture:****Poisons Act****Regulated explosives precursors**

None of the ingredients is listed.

**Regulated poisons**

None of the ingredients is listed.

**Reportable explosives precursors**

None of the ingredients is listed.

**Reportable poisons**

None of the ingredients is listed.

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#### GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

#### Hazard pictograms



**Signal word:** Danger

#### Hazard-determining components of labelling:

Calcium dihydroxide  
 Portland cement clinker

#### 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.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P501 Dispose of contents/container in keeping with local and national regulations.

#### Directive (EU) 2012/18

##### Named dangerous substances – ANNEX I :

None of the ingredients is listed.

#### Biozide ingredients (EU) 528/2012:

Data based on recipe and information on the raw materials from the supply chain.

#### UK VOC Regulations

This product falls under the scope of the Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012 (SI 2012/1715).  
 Classification: IIA(c) – Exterior walls of mineral substrate  
 VOC content: < 40 g/l (see Section 9)

#### UK REACH

Regulation (EC) No 1907/2006 as retained in UK law concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.  
 Includes amendments from Commission Regulation (EU) No 878/2020.

#### GB CLP

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as retained in UK law.

#### Waste Regulations

Regulation (EC) No 1013/2006 on shipments of waste, as retained in UK law.  
 Also subject to the Environmental Protection Act 1990 and Waste (England and Wales) Regulations 2011.

#### Biocidal Products Regulation (GB BPR)

Regulation (EC) No 528/2012 concerning the making available on the market and use of biocidal products, as retained in UK law.



Revision:

Review Date:

## 15.2 Chemical Safety Assessment:

A Chemical Safety Assessment has not been carried out.

## SECTION 16: OTHER INFORMATION

### 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>.
- [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 GB 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](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.

Revision:

Review Date:



[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)<sub>2</sub>), European Commission, DG Employment, Social Affairs and Equal Opportunities, SCOEL/SUM/137 February 2008

#### 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, bioaccumulative properties

**ADR:** Accord relatif au transport international 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

**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 (UK REACH)

**LC50:** Lethal concentration, 50 percent

**LD50:** Lethal dose, 50 percent

**ATE:** Acute toxicity estimate values

**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

**Skin Sens. 1B:** Skin sensitisation – Category 1B

**STOT SE 3:** Specific target organ toxicity (single exposure) – Category 3

The information provided in this datasheet is based on the data available to us at the date of its publication.

It is the user's responsibility to take appropriate precautionary measures and apply the recommendations described previously. The information presented in this datasheet should not be considered exhaustive.

Any use of the product not specified in the instructions on the packaging, our website, or other documents provided by our company is entirely the responsibility of the user.

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