

SAFETY INFORMATION

Mortar Mix

(BS EN 450-1) Health and Safety Information

SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1 Product identifier		
Product Name	Cement: Lime: Sand Mortar	
Mixture	EINECS	CAS
Portland cement clinker	266-043-4	65997-15-1
Hydrated Lime (calcium dihydroxide)	215-137-3	1305-62-0
Trade Name(s)	Mortar Mix, Brick Mortar	

1.2 Relevant identified uses of the mixture and uses advised against

Mortars are used for building and construction work, such as masonry construction (brickwork and blockwork) and rendering, as well as for small repairs to existing construction. Mortars are used industrially, by professionals as well as by consumers in building and construction work, indoor and outdoor. The identified uses of cement containing mortars cover the dry products and the products in a wet state. See section 16.2 for more information regarding use descriptors and categories. Any uses not mentioned above, are advised against.

1.3 Details of the supplier of the safety data sheet

Tarmac Cement

Tarmac cement and lime,
 Portland House, Bickenhill Lane,
 Birmingham B37 7BQ

Technical helpdesk: 0845 812 6323

Email: info-cement@tarmac.com

1.4 Emergency telephone

Emergency telephone number available during office hours: Tel 0845 812 6323

Emergency telephone number available outside office hours: No

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the mixture

2.1.1 According to Regulation (EC) No 1272/2008 (CLP)		
Hazard class	Hazard category	Hazard statements
Skin irritation	2	H315: Causes skin irritation
Serious eye damage/eye irritation	1	H318: Causes serious eye damage
Skin sensitisation	1B	H317: May cause an allergic skin reaction

2.1.2 According to Directive 1999/45/EC

Xi Irritant

R38 Irritating to skin

R41 Risk of serious damage to eyes

R43 May cause sensitisation by skin contact

2.2 Label elements

According to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms



Signal word

Danger

Contains Portland cement and Calcium Dihydroxide

Hazard statements

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H318 Causes serious eye damage

Precautionary statements

P102 Keep out of reach of children

P280 Wear protective gloves/protective clothing/eye protection/face protection

P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do Continue rinsing. Immediately call a doctor/physician.

P302+P352+P333+P313: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention

P261+P304+P340+P312: Avoid breathing dust/fume/gas/mist/vapours/spray. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a doctor/physician if you feel unwell

P501 Dispose of contents/container to: Harden by application of water and dispose of as concrete waste

Supplemental information

Skin contact with wet (fresh) mortar may cause irritation, dermatitis or burns. May cause damage to products made of aluminium or other non-noble metals.

2.3. Other hazards

Cement does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH (Regulation (EC) No 1907/2006). Hydrated lime does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH (Regulation (EC) No 1907/2006). Cement dust may cause mechanical irritation of the eyes, skin nose and throat. When mortar reacts with water, for instance in wet (fresh) mortar, or when it becomes damp, a strong alkaline solution is produced. Due to the high alkalinity, wet cement may provoke skin and eye irritation. Cement in the mortar is either naturally low in soluble chromium VI or reducing agents have been added to control the levels of sensitising soluble chromium (VI) to below 2 ppm (0.0002%) of the total dry weight of the cement ready for use according to legislation specified under Section 15.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not Applicable

3.2. Mixtures

Contains less than 1% crystalline silica

Information on ingredients			
Substance		Portland cement clinker	Hydrated Lime (calcium dihydroxide)
Concentration range (%by wt in cement)		5-100%	<5%
Registration No			01-2119475151-45-0135
EINECS		266-043-4	215-137-3
CAS		65997-15-1	1305-62-0
Classification 67/548/EEC	Symb [C&L] R	X _i R37 R38 R41 R43	X _i R37 R38 R41
Classification Regulation (EC) 1272/2008	Hazard Class Category	Skin Irritation cat 2. Serious eye damage/eye irritation cat 1. Skin sensitisation cat 1. STOT SE respiratory tract irritation cat 3.	Skin Irritation cat 2. Serious eye damage/eye irritation cat 1. STOT SE respiratory tract irritation cat 3.
	Hazard Statement	H315: Causes skin irritation H318: Causes serious eye damage H317: May cause an allergic skin reaction H335: May cause respiratory irritation	315: Causes skin irritation H318: Causes serious eye damage H335: May cause respiratory irritation

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General notes

No personal protective equipment is needed for first aid responders. First aid workers should avoid contact with wet cement mortar.

Following contact with eyes

Do not rub eyes in order to avoid possible cornea damage as a result of mechanical stress. Remove contact lenses if any. Incline head to injured eye, open the eyelid(s) widely and flush eye(s) immediately by thoroughly rinsing with plenty of clean water for at least 20 minutes to remove all

particles. Avoid flushing particles into uninjured eye. If possible, use isotonic water (0.9% NaCl). Contact a specialist of occupational medicine or an eye specialist.

Following skin contact

For dry cement, remove and rinse abundantly with water.

For wet cement, wash skin with plenty of water.

Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.

Seek medical treatment in all cases of irritation or burns.

Following inhalation

Move the person to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops or if discomfort, coughing or other symptoms persist.

Following ingestion

Do not induce vomiting. If the person is conscious, wash out mouth with water and give plenty of water to drink.

Get immediate medical attention.

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

Eyes: Eye contact with mortar (dry or wet) may cause serious and potentially irreversible injuries.

Skin: Mortar may have an irritating effect on moist skin (due to sweat or humidity) after prolonged contact or may cause contact dermatitis after repeated contact.

Prolonged skin contact with wet mortar may cause serious burns because they develop without pain being felt (for example when kneeling in wet concrete even when wearing trousers).

For more details see Reference (1).

Inhalation: Repeated inhalation of dust from dry mortar over a long period of time increases the risk of developing lung diseases

Medical conditions aggravated by exposure: Inhaling mortar dust may aggravate existing respiratory system disease(s) and/or medical conditions such as emphysema or asthma and/or existing skin and/or eye conditions.

Environment: Under normal use, mortar is not hazardous to the environment.

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

If in eyes, obtain prompt consultation, preferably from an ophthalmologist as this is the most severe hazard associated with the product. When contacting a doctor/physician, take this SDS or the product label with you.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Mortar is not flammable.

5.2. Special hazards arising from the substance or mixture

Mortars are non-combustible and non-explosive and will not facilitate or sustain the combustion of other materials.

5.3. Advice for fire-fighters

Mortar poses no fire-related hazards. No need for special protective equipment for fire-fighters.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Wear protective equipment as described under Section 8 and follow the advice for safe handling and use given under Section 7.

6.1.2 For emergency responders

Emergency procedures are not required. However, respiratory protection is needed in situations with high dust levels.

6.2. Environmental precautions

Do not wash concrete down sewage and drainage systems or into bodies of water (e.g. streams). Avoid release to the environment. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Collect the spillage in a dry state if possible.

Dry mortar

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 slurring with water (see wet mortar).

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.

Avoid inhalation of mortar dust and contact with skin. Place spilled materials into a container. Solidify before disposal as described under Section 13.

Wet mortar

Clean up wet mortar and place in a container. Allow material to dry and solidify before disposal as described under Section 13.

6.4. Reference to other sections

See sections 8 and 13 for more details.

SECTION 7: HANDLING AND STORAGE

Do not handle or store near food and beverages or smoking materials.

7.1. Precautions for safe handling

The so-called “Good practice guides” which contain advice on safe handling practices can be found from: <http://www.nepsi.eu/good-practice-guide.aspx>. These good practices have been adopted under the Social Dialogue “Agreement on Workers’ Health Protection through the Good Handling and Use of Crystalline Silica and Products containing it by Employee and Employer European sectoral associations, among which CEMBUREAU.

7.1.1 Protective measures

Follow the recommendations as given under Section 8. To clean up dry mortar, see Subsection 6.3.

Measures to prevent fire

Not applicable.

Measures to prevent aerosol and dust generation

Do not sweep. Use dry clean-up methods such as vacuum clean-up or vacuum extraction, which do not cause airborne dispersion. Do not blow off dust with compressed air.

Measure to protect the environment

No particular measures.

7.1.2 Information on general occupational hygiene

Avoid inhalation. Do not eat or smoke when using the product. Use protective clothing and gloves to avoid skin contact. Plastic (nitrile) covered cotton gloves are preferred to leather gloves. In a dusty environment, wear dust mask and protective goggles.

Cleanse skin thoroughly after use and apply a skin care product. Change any wet clothing, shoes or gloves immediately. Contaminated work clothing should not be taken home.

7.2. Conditions for safe storage, including any incompatibilities

Packed mortar products should be stored in unopened bags clear of the ground in cool, dry conditions and protected from excessive draught in order to avoid degradation of quality. Bags should be stacked in a stable manner. Do not use aluminium containers for the storage or transport of wet cement containing mixtures such as mortar due to incompatibility of the materials.

7.3. Specific end use(s)

No additional information for the specific end uses (see section 1.2).

7.4. Control of soluble Cr (VI)

For mortar containing cements treated with a Cr (VI) reducing agent according to the regulations given in Section 15, the effectiveness of the reducing agent diminishes with time. Therefore, mortar bags and/or delivery documents will contain information on the packaging date, 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 0.0002 % of the total dry weight of the cement ready for use, according to EN 196-10. They will also indicate the appropriate storage conditions for maintaining the effectiveness of the reducing agent.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1 Exposure limit values

Hydrated Lime (CAS No. 1305-62-0)

- 5 mg/m³

Portland cement (CAS No. 65997-15-1)

- Total inhalable dust 10 mg/m³
- Respirable dust 4 mg/m³

DNEL		
Use	PCs*	DNELs
Professional or Consumer (DIY) use as a building and construction material	9a, 9b	Inhalation: 4 mg/m ³ (as respirable dust) over an 8 hour shift Dermal: Could not be derived (see ES, section 16) Oral: Could not be derived (see ES, section 16)

*PC's are identified uses and defined in section 16.2

PNEC		
Hazard Assessment		PNEC
Aqua	Freshwater	0.49 mg/L
	Marine Water	0.32 mg/L
	Intermittent Releases	1080 mg/kg soil dw
STP (Sewage Treatment Plant)		3 mg/L
Soil		1080 mg/kg soil dw

8.2. Exposure controls

8.2.1 Appropriate engineering controls

Measures to reduce generation of dust and to avoid dust propagating in the environment such as de-dusting, exhaust ventilation and dry clean-up methods which do not cause airborne dispersion. Do not blow off dust using compressed air.

Use	Professional or Consumer (DIY) use as a building and construction material
PCs*	9a, 9b
Exposure	Several minutes - hours. 2 times per year. 1.25 m ³ /hr: Light working conditions
Localised controls	Protective goggles as well as face masks during dusty work. Work gloves should be chosen carefully (see section 8.2.2)
Efficiency	Not defined

8.2.2 Individual protection measures such as personal protection equipment



General

During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary then appropriate waterproof personal protective equipment must be worn.

Do not eat, drink or smoke when working with cement to avoid contact with skin or mouth.

Before starting to work with cement, apply a barrier cream and reapply it at regular intervals.

Immediately after working with cement or cement-containing materials, workers should wash or shower or use skin moisturisers. Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.

Eye/face protection

Wear approved glasses or safety goggles according to EN 166 when handling dry or wet cement to prevent contact with eyes.



Skin protection

Use watertight, wear- and alkali-resistant protective gloves (e.g. nitrile soaked cotton gloves with CE marking) internally lined with cotton; boots; closed long-sleeved protective clothing as well as skin care products (e.g. barrier creams) to protect the skin from prolonged contact with wet cement. Particular care should be taken to ensure that wet cement does not enter the boots. For the gloves, respect the maximum wearing time to avoid skin problems. In some circumstances, such as when laying concrete or screed, waterproof trousers or kneepads are necessary. Choose work gloves carefully, Leather gloves can become wet and can facilitate burns. When working in a wet environment, cotton gloves with plastic covering (nitrile) are better. Wear gauntlet gloves during overhead work because they can considerably reduce the amount of humidity which permeates the working clothes.



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, (e.g. EN 149, EN 140, EN 14387, EN 1827) or national standard.

An overview of the APFs of different RPE (according to EN 529:2005) can be found in the glossary of MEASE (16).

Any RPE as defined above shall only be worn if the following principles are implemented in parallel: The duration of work (compare with "duration of exposure" above) should reflect the additional physiological stress for the worker due to the breathing resistance and mass of the RPE itself, due to the increased thermal stress by enclosing the head. In addition, it shall be considered that the worker's capability of using tools and of communicating are reduced during the wearing of RPE.

For reasons as given above, the worker should therefore be (i) healthy (especially in view of medical problems that may affect the use of RPE), (ii) have suitable facial characteristics reducing leakages between face and mask (in view of scars and facial hair). The recommended devices above which rely on a tight face seal 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

Thermal hazards

Not applicable.

8.2.3 Environmental exposure controls

Environmental exposure control for the emission of cement particles into air has to be in accordance with the available technology and regulations for the emission of general dust particles.

Air: Environmental exposure control for the emission of cement particles into air has to be in accordance with the available technology and regulations for the emission of general dust particles.

Water: Do not wash cement into sewage systems or into bodies of water, to avoid high pH. Above pH 9 negative ecotoxicological impacts are possible.

Soil and terrestrial environment: No special emission control measures are necessary for the exposure to the terrestrial environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- (a) Appearance: Dry cement is a finely ground solid inorganic material (grey or white powder). Main particle size: 5-30 µm
- (b) Odour: Odourless
- (c) Odour threshold: No odour threshold, odourless
- (d) pH: (T = 20°C in water, water-solid ratio 1:2): 11-13.5
- (e) Melting point: > 1 250 °C
- (f) Initial boiling point and boiling range: Not applicable as under normal atmospheric conditions, melting point >1 250°C
- (g) Flash point: Not applicable as is not a liquid
- (h) Evaporation rate: Not applicable as is not a liquid
- (i) Flammability (solid, gas): Non-combustible solid which does not cause or contribute to fire through friction
- (j) Upper/lower flammability or explosive limits: Not applicable as is not a flammable gas
- (k) Vapour pressure: Not applicable as melting point > 1250 °C
- (l) Vapour density: Not applicable as melting point > 1250 °C
- (m) Relative density: 2.75-3.20; Apparent density: 0.9-1.5 g/cm³

- (n) Solubility(ies) in water (T = 20 °C): slight (0.1-1.5 g/l)
- (o) Partition coefficient: n-octanol/water: Not applicable as product is an inorganic mixture
- (p) 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)
- (q) Decomposition temperature: Not applicable as no organic peroxide present
- (r) Viscosity: Not applicable as not a liquid
- (s) Explosive properties: Not applicable. Not explosive or pyrotechnic. Not in itself capable by chemical reaction of producing gas at such temperature and pressure and at such a speed as to cause damage to the surroundings. Not capable of a self-sustaining exothermic chemical reaction.
- (t) Oxidising properties: Not applicable as does not cause or contribute to the combustion of other materials

9.2. Other information

Not applicable.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

When mixed with water, cements will harden into a stable mass that is not reactive in normal environments.

10.2 Chemical stability

Dry cements are stable as long as they are properly stored (see Section 7) and compatible with most other building materials. They should be kept dry. Contact with incompatible materials should be avoided. Wet cement is alkaline and incompatible with acids, with ammonium salts, with aluminium or other non-noble metals. Cement dissolves in hydrofluoric acid to produce corrosive silicon tetrafluoride gas. Cement reacts with water to form silicates and calcium hydroxide. Silicates in cement react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

10.3. Possibility of hazardous reactions

Mortar Mix does not cause hazardous reactions.

10.4. Conditions to avoid

Humid conditions during storage may cause lump formation and loss of product quality.

10.5. Incompatible materials

Acids, ammonium salts, aluminium or other non-noble metals. Uncontrolled use of aluminium powder in wet mortar should be avoided as hydrogen is produced. Wet cement is alkaline and incompatible with acids, with ammonium salts, with aluminium or other non-noble metals. Cement dissolves in hydrofluoric acid to produce corrosive silicon tetrafluoride gas.

10.6. Hazardous decomposition products

Uncontrolled use of aluminium powder in wet mortar should be avoided as hydrogen is produced. Cement dissolves in hydrofluoric acid to produce corrosive silicon tetrafluoride gas.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Information on toxicological effects			
Hazard class	Cat	Effect	Reference
Acute toxicity - dermal	-	Limit test, rabbit, 24 hours contact, 2,000 mg/kg body weight - no lethality. Based on available data, the classification criteria are not met.	(2)
Acute toxicity - inhalation	-	No acute toxicity by inhalation observed. Based on available data, the classification criteria are not met.	(9)
Acute toxicity - oral	-	Based on available data, the classification criteria are not met.	Literature survey
Skin corrosion/irritation	2	Cement (in mortar) in contact with wet skin may cause thickening, cracking or fissuring of the skin. Prolonged contact in combination with abrasion may cause severe burns.	(2) Human experience
Serious eye damage/irritation	1	Portland cement clinker caused a mixed picture of corneal effects and the calculated irritation index was 128. Mortar contains Portland cement clinker and hydrated lime Direct contact with cement (in mortar) may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact by larger amounts of dry cement (in mortar) or splashes of wet mortar may cause effects ranging from moderate eye irritation (e.g. conjunctivitis or blepharitis) to chemical burns and blindness	(10), (11)
Skin sensitisation	1B	Some individuals may develop eczema upon exposure to wet cement dust from mortar, caused either by the high pH which induces irritant contact dermatitis after prolonged contact, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis and is a combination of the two above mentioned mechanisms. If the cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness of the chromate reduction is not exceeded, a sensitising effect is not expected [Reference (3)].	(3), (4), (17)
Respiratory sensitisation	-	There is no indication of sensitisation of the respiratory system. Based on available data, the classification criteria are not met.	(1)
Germ cell mutagenicity	-	No indication. Based on available data, the classification criteria are not met.	(12), (13)
Carcinogenicity	-	No causal association has been established between Portland cement or Hydrated Lime exposure and cancer. The epidemiological literature does not support the designation of Portland cement as a suspected human carcinogen. Portland cement is not classifiable as a human carcinogen (According to ACGIH A4: Agents that cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity that are sufficient to classify the agent with one of the other notations.). Based on available data, the classification criteria are not met.	(1) (14)

Information on toxicological effects (continued)			
Hazard class	Cat	Effect	Reference
Reproductive toxicity	-	Based on available data, the classification criteria are not met.	No evidence from human experience
STOT-single exposure	-	Product overall is not considered classified. The additivity method in accordance with Section 3.8.3.4.4. of CLP1272/2008 has been undertaken and it was found that <20% components are classified as STOT SE 3. Cement and hydrated lime dust from mortar 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.	(1)
STOT-repeated exposure	-	There is an indication of COPD. The effects are acute and due to high exposures. No chronic effects or effects at low concentration have been observed. Based on available data, the classification criteria are not met.	(15)
Aspiration hazard	-	Not applicable as cements are not used as an aerosol.	

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

The product is not hazardous to the environment. Eco-toxicological tests with Portland cement on *Daphnia magna* [Reference (5)] and *Selenastrum coli* [Reference (6)] have shown little toxicological impact. Therefore LC50 and EC50 values could not be determined [Reference (7)]. There is no indication of sediment phase toxicity [Reference (8)]. The addition of large amounts of cement to water may, however, cause a rise in pH and may, therefore, be toxic to aquatic life under certain circumstances.

12.2. Persistence and degradability

Not relevant. After hardening, cement presents no toxicity risks.

12.3. Bioaccumulative potential

Not relevant. After hardening, cement presents no toxicity risks.

12.4. Mobility in soil

Not relevant. After hardening, cement presents no toxicity risks.

12.5. Results of PBT and vPvB assessment

Not relevant. After hardening, cement presents no toxicity risks.

12.6. Other adverse effects

Not relevant.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Do not dispose of into sewage systems or surface waters.

Product - mortar that has exceeded its shelf life

EWC entry: 10 13 99 (wastes not otherwise specified) (and when demonstrated that it contains more than 0.0002% soluble Cr (VI)); shall not be used/sold other than for use in controlled closed and totally automated processes or should be recycled or disposed of according to local legislation or treated again with a reducing agent.

Product - unused residue or dry spillage

EWC entry: 10 13 06 (Other particulates and dust)
Pick up dry unused residue or dry spillage as is. Mark the containers. Possibly reuse depending upon shelf life considerations and the requirement to avoid dust exposure. In case of disposal, harden with water and dispose according to "Product - after addition of water, hardened"

Product - slurries

Allow to harden, avoid entry in sewage and drainage systems or into bodies of water (e.g. streams) and dispose of as explained below under "Product - after addition of water, hardened".

Product - after addition of water, hardened

Dispose of according to the local legislation. Avoid entry into the sewage water system. Dispose of the hardened product as concrete waste. Due to the inertisation, mortar waste is not a dangerous waste.

EWC entries: 17 01 01 (construction and demolition wastes).

Packaging

Completely empty the packaging and process it according to local legislation.

EWC entry: 15 01 01 (waste paper and cardboard packaging).

SECTION 14: TRANSPORT INFORMATION

Mortar is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID), therefore no classification is required.

No special precautions are needed apart from those mentioned under Section 8.

14.1. UN number

Not relevant

14.2. UN proper shipping name

Not relevant

14.3. Transport hazard class(es)

Not relevant

14.4. Packing group

Not relevant

14.5. Environmental hazards

Not relevant

14.6. Special precautions for user

Not relevant

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not relevant

SECTION 15: REGULATORY INFORMATION

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

EU regulatory information

Mortar is a mixture according to REACH and is not subject to registration. The marketing and use of cement containing mortar is subject to a restriction on the content of soluble Cr (VI) (REACH Annex XVII point 47 Chromium VI compounds). Hydrated Lime is subject to registration; therefore a chemical safety assessment (CSA) has been carried out.

National regulatory information

CONIAC Health Hazard Information Sheet No. 26 (CEMENT)

Health and Safety at Work etc Act 1974

Control of Substances Hazardous to Health (Regulations) PORTLAND CEMENT DUST – criteria document for an

occupational

exposure limit. June 1994 (ISBN 07176 – 0763 – 1)

HSE Guidance Notes EH26 (Occupational Skin Diseases – Health and

Safety Precautions)

HSE Guidance Note EH40 (Workplace Exposure Limits)

Any authorised manual on First Aid by St. John's/

St. Andrew's/Red Cross Manual Handling Operations

Regulations

Environmental Protection Act

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out for mortar by the supplier.

A Chemical Safety Assessment has however, been carried out for the hydrated lime component.

An exposure scenario (ES), for hydrated lime has been attached as Annex A. The included ES relate to the uses applicable to the Mortar Mix product.

SECTION 16: OTHER INFORMATION

16.1 Indication of changes

This safety data sheet includes the information required to meet the provisions of Regulation (EU) No 453/2010.

The following sections contain revisions or new statements: 1 - 16

16.2 Identified uses and use descriptors and categories

A Chemical Safety Assessment has been carried out for the hydrated lime component. The table below gives an overview of all relevant identified uses of Hydrated Lime. In relation to the Mortar Mix product, only one ES was deemed to be for an applicable use. For this specific use, a set of risk management measures or localised controls has been derived (see section 8) which need to be put in place by the user of mortar to bring the exposure to an acceptable level.

Identified Uses - Use Description	Category	Descriptor
SU 21 Consumer: Use of Hydrated Lime as a building or construction material	PC 9a	Coatings and paints, thinners, paint removers
	PC 9b	Fillers, putties, plasters, modelling clay
	ERC 8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
	ERC 8d	Wide dispersive outdoor use of processing aids in open systems
	ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
	8f	Wide dispersive outdoor use resulting in inclusion into or onto a matrix

16.3 Abbreviations and acronyms

<i>ACGIH</i>	American Conference of Industrial Hygienists
<i>ADR/RID</i>	European Agreements on the transport of Dangerous goods by Road/Railway
<i>APF</i>	Assigned protection factor
<i>CAS</i>	Chemical Abstracts Service
<i>CLP</i>	Classification, labelling and packaging (Regulation (EC) No 1272/2008)
<i>COPD</i>	Chronic Obstructive Pulmonary Disease
<i>DNEL</i>	Derived no-effect level
<i>EC50</i>	Half maximal effective concentration
<i>ECHA</i>	European Chemicals Agency
<i>EINECS</i>	European Inventory of Existing Commercial chemical Substances
<i>EPA</i>	Type of high efficiency air filter
<i>ES</i>	Exposure scenario
<i>EWC</i>	European Waste Catalogue
<i>FF P</i>	Filtering facepiece against particles (disposable)
<i>FM P</i>	Filtering mask against particles with filter cartridge
<i>GefStoffV</i>	Gefahrstoffverordnung
<i>HEPA</i>	Type of high efficiency air filter
<i>H&S</i>	Health and Safety
<i>IATA</i>	International Air Transport Association
<i>IMDG</i>	International agreement on the Maritime transport of Dangerous Goods LC50 Median lethal dose
<i>MEASE</i>	Metals estimation and assessment of substance exposure, EBRC Consulting GmbH for Eurometaux, http://www.ebrc.de/ebrc/ebrc-mease.php
<i>MS</i>	Member State
<i>OELV</i>	Occupational exposure limit value
<i>PBT</i>	Persistent, bio-accumulative and toxic
<i>PNEC</i>	Predicted no-effect concentration

<i>PROC</i>	Process category
<i>RE</i>	Repeated exposure
<i>REACH</i>	Registration, Evaluation and Authorisation of Chemicals
<i>RPE</i>	Respiratory protective equipment
<i>SCOEL</i>	Scientific Committee on Occupational Exposure Limit Values
<i>SDS</i>	Safety Data Sheet
<i>SE</i>	Single exposure
<i>STP</i>	Sewage treatment plant
<i>STOT</i>	Specific Target Organ Toxicity
<i>TLV-TWA</i>	Threshold Limit Value-Time-Weighted Average
<i>TRGS</i>	TechnischeRegelInfürGefahrstoffe
<i>VLE-MP</i>	Exposure limit value-weighted average in mg by cubic meter of air
<i>vPvB</i>	Very persistent, very bio-accumulative
<i>w/w</i>	Weight by weight
<i>WWTP</i>	Waste water treatment plant

16.4 Key literature references and sources of data

- (1) Portland Cement Dust - Hazard assessment document EH75/7, UK Health and Safety Executive, 2006. Available from: <http://www.hse.gov.uk/pubns/web/portlandcement.pdf>.
- (2) Observations on the effects of skin irritation caused by cement, Kietzman et al, *Dermatosen*, 47, 5, 184-189 (1999).
- (3) 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.
- (4) 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.
- (5) 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).
- (6) 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).
- (7) 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.

- (8) Final report Sediment Phase Toxicity Test Results with *Corophium volutator* for Portland clinker prepared for Norcem A.S. by AnalyCenEcotox AS, 2007.
- (9) TNO report V8801/02, An acute (4-hour) inhalation toxicity study with Portland Cement Clinker CLP/GHS 03-2010-fine in rats, August 2010.
- (10) TNO report V8815/09, Evaluation of eye irritation potential of cement clinker G in vitro using the isolated chicken eye test, April 2010.
- (11) TNO report V8815/10, Evaluation of eye irritation potential of cement clinker W in vitro using the isolated chicken eye test, April 2010.
- (12) 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.
- (13) Cytotoxicity and genotoxicity of cement dusts in A549 human epithelial lung cells in vitro; Gminski et al, Abstract DGPT conference Mainz, 2008.
- (14) 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.
- (15) 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, Hilde Notø, Helge Kjuus, MaritSkogstad and Karl-Christian Nordby, National Institute of Occupational Health, Oslo, Norway, March 2010.

- (16) MEASE, Metals estimation and assessment of substance exposure, EBRC Consulting GmbH for Eurometaux, <http://www.ebrc.de/ebrc/ebrc-mease.php>.
- (17) Occurrence of allergic contact dermatitis caused by chromium in cement. A review of epidemiological investigations, KåreLenvik, Helge Kjuus, NIOH, Oslo, December 2011.

16.5 Relevant R-phrases and/or H-Statements

- R37** Irritating to respiratory system
- R38** Irritating to skin
- R41** Risk of serious damage to eyes
- R43** May cause sensitisation by skin contact

16.6 Training advice

In addition to health, safety and environmental training programs for their workers, companies must ensure that workers read, understand and apply the requirements of this SDS.

16.7 Further information

See Annex A for the ES of the following substances: Hydrated Lime.

The data and test methods used for the purpose of classification of this product are given or referred to in section 11.1.

16.8 Disclaimer

The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user. It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his/her own activities.

For further information

Technical helpdesk

Tel: 0845 812 6232

E-mail: info-cement@tarmac.com

Customer services & sales

Tel: 0845 812 6300

E-mail: customerservice@tarmac.com

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