Safety Data Sheet
M.R. Polymer Cement Renders

1. Identification of the substrate/preparation and of the company/undertaking

1.1 Identification/Trade name: Cement Renders

This Safety Data Sheet relates to the following products:

M.R. S2 Polymer Plain Render for below dpc	M.R. Bedding Adhesive
M.R. S3 Polymer Dubbing Render	M.R. Scrim Adhesive
M.R. S4 Polymer Plain Render	M.R. Rendabrick Base Coat
M.R. S5 Polymer Dubbing Render	M.R. Rendabrick Mortar Coat
M.R. S5 Polymer Plain Render	M.R. Rendabrick Finish Coat
M.R. S5 Polymer Dashing Render	M.R. Pointing Mortar
M.R. S7 Polymer Dashing Render	Alumasc Base Coat

1.2 Use of the substance/preparation:

These products are used in the production of building materials, for building construction or as mortars.

1.3 Manufacturer/Supplier:

Alumasc Exterior Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside, WA9 4JG. United Kingdom
Tel: +44 (0)1744 648400 Fax: +44 (0)1744 648401 E-mail: info@alumasc-exteriors.co.uk

1.4 Telephone number in case of emergency:
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Email: info@alumasc-exteriors.co.uk

2. Hazards identification

2.1 Classification of the mixture

This product is classified as dangerous in accordance with EC 1272/2008 (CLP):

Eye Dam. 1; H318

Skin Irrit. 2; H315

STOT SE 3; H335

2.2 Label elements


Signal word: Danger

H – Statements	H315	Causes skin irritation
	H318	Causes serious eye damage
	H335	May cause respiratory irritation
P – Statements	P102	Keep out of reach of children
	P260a	Do not breathe dust
	P280f	Wear protective gloves, eye and face protection
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P313	Get medical advice / attention
	P501a	Dispose of contents/container in accordance with local regulations.

Contains: Calcium oxide. When mixed with water it will form calcium hydroxide which has a corrosive effect on skin and eyes.

2.3 Other hazard information

None of the components of the mixture meet the criteria for PBT or vPvB according to Annex XIII of REACH.

When cement is mixed with water, or when cement becomes damp from contact with sweat or tears, a strong alkaline solution is produced. If this comes into contact with the eyes or skin it may cause serious burns and ulceration. The eyes are particularly vulnerable and damage will increase with contact time. Strong alkaline solutions in contact with the skin tend to damage the nerve endings first before damaging the skin, therefore chemical burns can develop without pain being felt at the time.

M.R. Polymer Cement Renders may cause dermatitis until set.

- Irritant contact dermatitis is due to a combination of the wetness, alkalinity and abrasiveness of the constituent materials.

- Reducing agents added to cement lower the potential for allergic contact dermatitis arising, principally, from chromium (VI) salts. If used outside of the declared shelf life of the reducing agent, there may be a risk of allergic contact dermatitis caused mainly by the sensitivity of an individual's skin.

3. Composition and information about the components

3.1 The only "substance" that significantly contributes to the hazards of these mixtures is Portland cement.

Substance	Conc (%)	Classification	Hazard statements
Portland cement CAS 65997-15-1 EC 266-043-4	Up to 30%	Eye Dam. 1 Skin Irrit. 2 STOT SE 3	H318 Causes serious eye damage H315 Causes skin irritation H335 May cause respiratory irritation

Portland cement is actually a mixture of substances and is regarded as a UVCB (Substance of Unknown of Variable Composition). It typically consists of tri-and dicalcium-silicates, tricalcium-aluminate, tetracalcium-aluminoferrite and calcium oxide in varying proportions. However, the toxicology discussed in Section 11 relates to data on Portland cement (or very similar materials) per se.

Any other substances which are classified as "hazardous" under Regulation EC 1272/2008 in these mixtures are present below 1% and are not considered to contribute to the hazards. Small amounts of crystalline may be present. Whilst this has been assigned a Workplace Exposure Limit (see Section 8) because of its potential to cause respiratory problems on inhalation, it is not classified as a hazardous substance. Respirable crystalline silica is unlikely to become airborne during normal handling and recommended uses and will not therefore contribute to the hazards of these products.

Trace amounts of chromium (VI) compounds may also be present which can cause sensitisation by skin contact. However, in correctly stored mixtures within the shelf-life, these are maintained to below 0.0002% and the products would not be regarded as "skin sensitisers".

4. First-aid measures

4.1 Description of first aid measures

Eye contact:
Do not rub eyes in order to avoid possible corneal damage by mechanical stress. Remove contact lenses if any. Incline head to the injured eye. Open the eyelid widely and flush immediately by rinsing with plenty of clean water for at least 20 minutes to remove all particles. Avoid flushing particles into the

uninjured eye. If possible use isotonic water (0.9% sodium chloride). Contact a specialist of occupational medicine or an eye specialist.

Skin contact:
Wash immediately with soap and water. Do not use solvents or thinners. Remove contaminated clothing, footwear, watches etc. and clean thoroughly before re-use. Obtain medical attention if any symptoms persist after washing or in the case of burns.

Inhalation:
Remove to fresh air. Keep warm and at rest. Obtain medical attention if any symptoms persist.

Ingestion:
If the person is conscious wash out the mouth with water and give plenty of water to drink. Obtain medical attention immediately. Do **not** induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact may cause serious and potentially irreversible damage.
These products may have an irritating effect on skin or may cause contact dermatitis after repeated exposures.

4.3 Indication of immediate medical attention and special treatment needed

No specific treatment needed other than that mentioned in Section 4.1. When contacting a physician take this safety data with you.

5. Fire-fighting measures

5.1 Extinguishing media

These products are not flammable and the selection of fire fighting measures will be dictated from the hazards encountered in the surrounding area. However, water used for fire extinguishing, which has been in contact with cement, may have high alkalinity.

5.2 Special hazards arising from the mixture

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

5.3 Advice for fire fighters

The selection of fire fighting measures will be dictated from the hazards encountered in the surrounding area.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

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

6.2 Environmental precautions

Do not wash cement down sewage and drainage systems or into bodies of water (e.g. streams).

6.3 Methods and material for containment and cleaning up

Collect spilled material; and use it. Use dry clean-up methods such as vacuum cleaner equipped with high efficiency particulate filters (HEPA filter) or an equivalent technique. Never use compressed air. Finally wash the area with water.

Place wet spillages in a container and allow the material to dry and solidify before disposal as described in Section 13.

6.4 Reference to other sections

See Sections 8 and 13 for more details.

7. Handling and storage

7.1 Precautions for safe handling

When handling cement bags, due regard should be paid to the risks outlined in the Manual Handling Operations Regulations. Some bags may have a small amount of cement on the outer surface. Appropriate personal protective clothing (see Section 8) should therefore be used whilst handling.

Avoid generating dust: - For bagged cement used in open ended mixers: first add water and then carefully add the cement. Keep the height of the fall low. Start the mixing smoothly. Do not compress empty bags, except when contained in another clean bag.

7.2 Conditions for safe storage, including incompatibilities

Bulk cement must be stored in silos that are waterproof, clean and protected from contamination, dry (internal condensation minimised) with stock rotated in chronological order of the despatch dates marked on delivery tickets.

Engulfment Hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bin or bulk truck, or other storage container or vessel that stores or contains cement without taking the proper

safety measures. Cement can build-up or adhere to the walls of a confined space. The cement can release, collapse or fall unexpectedly. Packed products must be stored in unopened bags clear of the ground in cool, dry conditions and protected from excessive draught. Bags should be stacked in a safe and stable manner.

For cements treated with a Cr (VI) reducing agent the effectiveness of the reducing agent diminishes with time. Therefore cement bags and/or delivery documents will contain information on the period of time (shelf life) for which the reducing agent will continue to maintain the level of soluble Cr (VI) below the imposed limit of 0.0002%, according to EN 197-10. They will also indicate the appropriate storage conditions for maintaining the effectiveness of the reducing agent.

7.3 Specific end uses

Only to be used for the purposes defined in Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters

The following limits apply in the UK.

Substance	8-hour time weighted average limit	15-minute time weighted average limit	Limit type
Inhalable dust	10 mg/m^3	-	Workplace Exposure Limit
Respirable dust	4 mg/m^3	-	Workplace Exposure Limit
Respirable crystalline silica	0.1 mg/m^3	-	Workplace Exposure Limit
Chromium (VI)	0.05 mg/m^3	-	Workplace Exposure Limit
Iron salts (as Fe)	1 mg/m^3	2 mg/m^3	Workplace Exposure Limit

8.2 Exposure controls

Where reasonably practicable, dust exposures should be controlled by engineering methods such as Local Exhaust Ventilation.

8.3 Occupational exposure controls:

Respiratory protection: Suitable respiratory protection should be worn when a person is potentially exposed to dust levels above the Workplace Exposure Limits. This should conform to the relevant EN standard (for example EN 149, EN 140, EN 14387, EN 1827).

Eye protection: Dust-proof goggles should be worn wherever there is a risk of cement powder or any cement/water mixture entering the eye. This should conform to EN 166.

Hand and skin protection: Use waterproof, abrasion and alkali resistant gloves. Waterproof clothing gloves and boots should be worn which ensure that cement, or any cement/water mixture, e.g. concrete or mortar, does not come into contact with the skin. Particular care should be taken to ensure that wet concrete does not enter the boots. Should wet mortar or wet concrete get inside boots, gloves or other protective clothing then this protective clothing should be immediately removed and the skin thoroughly washed as well as the protective clothing/footwear. Do not eat, drink or smoke when working with cement to avoid contact with the skin or mouth. Immediately after working with cement containing materials, workers should wash, shower or use skin moisturisers. Remove contaminated clothing, footwear, watches etc. and clean thoroughly before re-using them.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties of the mixture

Appearance:	Grey or white powder
Odour:	None.
Odour threshold:	Not applicable.
pH (when dissolved in water)	11 – 13.5
Melting point:	Over 1250 °C
Initial boiling point and boiling range:	Not applicable under normal atmospheric conditions
Flash point:	Non-combustible
Evaporation rate:	Not applicable
Flammability:	Non combustible
Upper/lower explosive limits	Non explosive
Vapour pressure:	Not known.
Density:	900-1500 kg/m^3
Solubility in water:	Slight (0.1 – 1.5 g/l)
Partition coefficient	Not applicable
Auto-ignition temperature	Not applicable

Decomposition temperature	Not applicable
Viscosity	Not applicable
Explosive properties	Not applicable
Oxidising properties	Not applicable
Decomposition temperature (°C):	Not known.
Explosive properties:	Not explosive.
Oxidising properties:	Not oxidising.

9.2 Other information

Mean particle size	5-30 microns

10. Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Dry cements are stable as long as they are stored properly under dry conditions (see Section 7). They are compatible with most other building materials.

Wet cement is alkaline and incompatible with acids, with ammonium salts, with aluminium or other non-noble metals.

10.3 Possibility of hazardous reactions

Not applicable.

10.4 Conditions to avoid

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

10.5 Incompatible materials

See 10.2

10.6 Hazardous decomposition products

Cements will not decompose into other hazardous by-products and do not polymerise.

11. Toxicological information

11.1 Information on toxicological effects

The flowing information relates to Portland cement, as kiln dust or clinker.

(a) Acute toxicity

Dermal
Limit test, rabbit, 24 hours contact, 2000 mg/kg bodyweight – no lethality.
Classification criteria not met [1].

Inhalation
No acute toxicity by inhalation observed. Classification criteria not met (Ref 2).

Oral
No indication of oral toxicity from studies with cement kiln dust. Based on available information from a literature survey the classification criteria not met.

(b) Skin corrosion/irritation

Dermal (Cat 2)
Portland cement clinker in contact with wet skin may cause thickening, cracking or fissuring of the skin. Prolonged contact in combination with abrasion may cause severe burns [1].

(c) Serious eye damage/irritation

Eye (Cat 1)
Portland cement clinker caused a mixed picture of corneal effects and the calculated irritation index was 128. Direct contact may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact with larger quantities of dry or wet cement may cause effects ranging from moderate eye irritation to chemical burns and blindness [3,4].

(d) Respiratory or skin sensitisation

Skin (Cat 1)
Some individuals may develop eczema upon exposure to wet clinker dust, caused either by the high pH which induces irritant contact dermatitis after prolonged contact, or by an immunological reaction to soluble chromium (VI) which elicits allergic contact dermatitis [5,6]*.

* If the cement contains a soluble Cr (VI) reducing agent, and as long as the mentioned period of effectiveness is not exceeded, a sensitising effect is not expected [7].

Respiratory
There is no indication of respiratory sensitisation. Based on available information the classification criteria not met [8].

(e) Germ cell mutagenicity

No indication. Based on available information the classification criteria not met [9,10].

(f) Carcinogenicity

No causal association has been established between Portland cement 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. Based on available information the classification criteria not met [8,11].

(g) Reproductive toxicity

Based on human experience the classification criteria not met.

(h) STOT-single exposure

Cat 3
Portland cement clinker dust may irritate the throat and respiratory tract. Coughing, sneezing and shortness of breath may occur following exposures in excess of occupational exposure limits. Overall, the pattern of evidence indicates that occupational exposure to cement dust has produced deficits in respiratory function. However, evidence available in insufficient to establish with any confidence the dose-response relationship to these effects [8].

(i) STOT - repeated exposure

There is an indication of chronic obstructive lung disease. The effects are acute and due to high exposures. No chronic effects or effects at low concentration have been observed. Based on available information the classification criteria not met [12].

(j) Aspiration hazard

Not applicable as cement products are not used as an aerosol.

Crystalline silica

These cement products may contain small amounts of crystalline silica, which is not classified as "hazardous" under Regulation EC 1272/2008. Nevertheless, prolonged or massive inhalation of respirable crystalline silica dust may cause a nodular pulmonary fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness [13]. The IARC (International Agency for Research on Cancer) believes that crystalline silica inhaled from occupational sources can cause lung cancer in humans [14]. It however pointed out that that not all crystalline silica types were to be incriminated. Additionally, there is a body of evidence suggesting that increased cancer risk would be limited to people already suffering from silicosis [15,16].

11.3 Medical conditions aggravated by exposure

Inhaling cement 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.

12. Ecological information

12.1 Toxicity

The product is not expected to be hazardous to the environment. Ecotoxicological tests with Portland cement on Daphnia magna [17] and Selenastrum coli [18] have shown little toxicological impact. Therefore LC50 and EC50 values could not be determined [19]. There is no indication of sediment phase toxicity [20]. The addition of large amounts of Portland cement to water may, however, cause a rise in pH and may 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.

13. Disposal considerations

13.1 Waste treatment methods

13.1.1 Product - cement that has exceeded its shelf life

As this may contain more than 0,0002% soluble Cr (VI) it shall not be used/sold, other than for use in c controlled closed and totally automated processes, or it should be treated again with a reducing agent.

Otherwise dispose as hazardous waste (EWC code 16 03 03), or preferably harden by adding water (see 13.1.4)

13.1.2 Product - unused residue or dry spillage

Pick up dry. Mark the containers. Possibly re-use depending upon shelf life considerations and the requirement to avoid dust exposure. In case of disposal, harden with water and dispose according to 13.1.4.

13.1.3 Product - slurries

Allow to harden, avoid entry in sewage and drainage systems or into bodies of water (e.g. streams) and dispose of as indicated in 13.1.4.

13.1.4 Product - after addition of water, hardened

Dispose of according to the current National or Devolved Administration legislation. Avoid entry into the sewage water system. EWC code: 17 01 01 (when hardened).

13.1.5 Paper packaging

Packaging contaminated with unhardened cement must be disposed of as hazardous waste (EWC code 15 01 10). If the cement residues are fully hardened the paper packaging may be disposed of as non-hazardous waste (EWC code 15 01 01).

14. Transport information

14.1 UN Number
Not a hazardous material with respect to transport Regulations.

14.2 UN Proper Shipping Name
Not a hazardous material with respect to transport Regulations.

14.3 Transport hazard Class (es)
Not a hazardous material with respect to transport Regulations.

14.4 Packing Group
Not a hazardous material with respect to transport Regulations.

14.5 Environmental hazards
Not a hazardous material with respect to transport Regulations.

14.6 Special precautions for the user
Not a hazardous material with respect to transport Regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
Not a hazardous material with respect to transport Regulations.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for this mixture

- Entries for Portland cement are found in the following Regulatory lists:

- European Union European Inventory of Existing Commercial Chemical Substances (EINECS).

- OECD Representative list of High Production Volume (HPV) chemicals.

- UK EH40 Workplace Exposure Limits.

- The following legislation (as amended) is applicable to these mixtures:

- The Control of Substances Hazardous to Health Regulations 2002.

- The Chemical (Hazard Information and Packaging for Supply) Regulations 2009.

- Regulation (EC) No 1272/2008 (The "CLP Regulations").

- Regulation (EC) No 1907/2006 (The "REACH Regulations").

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

16. Other information

This Safety Data Sheet has been prepared to reflect the modified requirements of Annex II of REACH.

References

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Final report Sediment Phase Toxicity Test Results with Corophium volutator for Portland clinker, prepared for Norchem A.S. by AnalyCen Ecotox AS, 2007.

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 their own activities.

Contact

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