

# Heritage Metakaolin Coarse

## Product Data Sheet

A dry ready mixed CL90 & Pozzolan mortar for building, pointing and plastering



### Product Description

Factory blended mortar using graded kiln dried sand, Lhoist CL90 and metakaolin, optionally combined with carefully selected additives to improve the mortar's physical and mechanical properties, whilst maintaining all of the virtues of a pure lime mortar.

### Mix Ratio & Binder

1:2 as standard, other mix ratios available on request. Lhoist CL90 and Metakaolin; gauged at 5%, 10% or 20% to customer requirements. Also available with 6mm and 18mm fibres.

### Aggregate

Available as standard with a 5mm down tan flint sharp sand. Other sands also available however not all of our stocked sands will work with this mix design.

### Usage

Cornerstone Heritage Mortars are multi-purpose mortars suitable for bedding, general building and pointing.

Suitable for applications in construction where the binder strength is appropriate for the host background or surface

Do not use this product if the temperature is above 30°C, below 5°C or if the risk of frost or snow is present within the next few weeks.

### Coverage

After mixing, a 25kg bag will produce approximately 14.5 litres of mortar.

For pointing applications; a single 25Kg bag will do approximately 1.5m<sup>2</sup> however this is dependent on pointing depth and joint width so this yield should only be used as a rough guide. On site trials will always give the best indication of yield for your specific project.

### Advantages

- Quality controlled production and product consistency. Measured mix performance for proof of suitability in specification.
- Optionally available with improved workability of mortar, extended working and finishing time and reduced risk of shrinkage.
- No long-term strength development other than carbonation.

### Colour and Texture

All of our Metakaolin Heritage Range mortars are entirely natural in colour. No pigments or colourants are added.

With lighter coloured mortars like these the finish applied will affect the final appearance of the mortar. Keeping finishing methods and timing consistent will keep the mortar or plaster looking even throughout the project.

Please note that as sands come from a natural source there can be some variation in colour. While variances are slight, for applications where colour is important such as unpainted pointing, we strongly advise that each elevation is completed using mortar from the same batch.

### Preparation

In general, this will be determined by the purpose and application of the mortar.

Dense impervious backgrounds/materials are unlikely to be very absorbent and require little to no dampening, whereas more absorbent backgrounds/materials require adequate dampening in order to prevent rapid drying.

Whilst the Heritage product range can optionally include additions to help mitigate these issues, best practice still needs to be followed.

Ensure surfaces are clean and free of dust and other debris.

For all other works, ensure the background is adequately dampened to promote adhesion/bond with the host surface.

### Mixing

A 25kg bag of mortar will require 4.5 to 6.5 litres of clean potable water. Adjust water to suit for bedding applications running the mix wetter for higher suction units, for pointing keep the mix as stiff as reasonably feasible but still workable. Always avoid making the mortar too wet, as this can promote shrinkage issues.

For drum type mixers, it is essential not to overfill the mixer. As a dry mixed material, it is possible that some settlement or separation may occur in the bag during transit; when mixing part bags, it is especially important that the dry contents are thoroughly blended prior to mixing with water.

**Best Practice/Advised Mixing:** First add 80 to 90% water of the total water into the mixer, followed by the dry mortar and turn the mixer on. Allow the mortar to mix until the water is thoroughly distributed, then add additional water to achieve desired consistency.

**Mixing Time:** For mixes without plasticizers there is not a risk of overmixing, it should be mixed for at least 8 minutes. For blends containing plasticizers mix for a minimum of 5 minutes, but for no longer

#### Manufactured by Cornerstone Mortars

Cornerstone products are CE marked and manufactured under an ISO9001:2015 accredited Factory Production Control System.

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than 10 minutes.

**Quenching:** Like most lime mortars this blend will benefit from Quenching; allow the mortar to stand for 10 to 20 minutes after mixing, before use. Whilst this is not mandatory you may find the mortar stiffens a bit if used straight out of the mixer, it may need a splash more water with remixing or just knocking back up again after 20 minutes as a result.

Once water has been added, this mortar has an open time of at least 24 hours. Longer in colder weather.

## Usage and Finishing

**Areas Of Use:** Our Heritage Range will be suitable for use onto masonry backgrounds with some suction; for application onto tanking please consult us first as special application methods may be required.

Render carrier boards like Celenit or similar are also suitable substrates however fine fibred wood wool or wood fibres insulation boards are not appropriate. For any other render carriers please contact us for more details on suitability.

**Coats:** When used as a render these products should be used as a minimum of two coats; a single coat application will ghost through the background.

**Application:** Always wet a substrate (including previous render layers) to control suction before use, however you don't want to be laying into water sitting on the surface of the wall as this will act as a slip-layer and prevent the render from bonding.

Dub out the wall to bring it roughly flat by filling pockets, voids or missing pointing with a relatively stiff mix. After dubbing out a shallow scratch should be applied to any areas which have been filled, this will help create a key for the scratch coat to bond to. Allow 48 hours for this to stiffen sufficiently to take the scratch coat of render. Keep these areas damp by regular mist spraying until the scratch coat is ready to be applied.

The scratch coat should be applied at a target thickness of 10-12mm with the 5mm sharp sand, this should be scratched using a cross-hatch pattern scratch to approximately 1/3 of the depth of the render. The more common 'wavy line' scratch used on modern sand and cement renders is not appropriate for this design of material. This coat should be left for a minimum of 7 days to build up in strength before application of a float coat. During this period the render should be damp cured by mist spraying and protection from direct sunlight and drying winds.

The float coat should be applied at a target thickness of 6-10mm using the 3mm or 5mm sand and should not be thicker than the scratch coat. The scratch coat may need mist spraying before application to control suction. This should be floated with a wooden or plastic float to compress the surface after application; lime renders should be stiffer than sand and cement at time of floating and should not drag under the float. Optionally this can then be sponged up after it's stiffened a little more to give a smoother surface if this is to be the final coat.

The float coat can be left at this point to give a coarse finish or it can be topped with a finer sand, if a top coat is to be applied then the surface should be devil floated to give a light key for the top coat.

After application the render should be kept damp to promote a cure and protected from direct sunlight and drying winds for a minimum of two weeks; longer in colder weather. This can be achieved by use of sheeted scaffolding, damp hung hessian or even just unprotected regular dampening in sheltered areas.

## Packaging

This product is supplied in 25kg polythene lined paper bags, palletised for shipping and handling. The packaging is a mixed material and should be recycled accordingly. Also available as tonne bags for 3 Tonne or higher order quantities.

## Storage

This product should be stored in dry conditions, in unopened bags and clear from the ground. Always protect bags from water and damp. Reseal part bags after opening if unused product is present. Use within 6 months of manufacturing date (provided on each bag).

## Health and Safety

### RISK PHRASES: R36 / R37 / R38 / R43

- Avoid contact with skin and eyes.
- Contact with wet mortar may cause irritation, dermatitis and/or burns.
- Contact between lime powder and body fluid (sweat, eye fluid etc.) may cause skin burns and respiratory irritation, dermatitis or burns.

### SAFETY PHRASES: S2 / S24/25 / S26 / S37

- Avoid eye and skin contact by wearing suitable eye protection, protective clothing and gloves.
- Avoid breathing dust.
- Keep out of reach of children.
- On contact with skin and/or eyes, rinse immediately with clean water and seek medical attention.

## Declaration

Cornerstone lime mortars, renders and plasters are manufactured to the requirements of BS EN 998-1: 2016 & BS EN 998-2: 2016.

These will contain no Portland Cement, GGBS, NHL, Natural Cement, or modern synthetic Polymers or water repellents.

## Document Control

Datasheet version 1.3, issued May 2024. More modern versions will supersede this datasheet, with no exclusions.

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