

## MONOCOUCHE RENDER: PRODUCT DESCRIPTION

The Monocouche render is a single-coat breathable, waterproof and decorative colour render. It is a cementitious and lime render with a designed mix formulation containing special additives principally for workability, water retention, adhesion and waterproofing. It is supplied as a ready-mixed dry material, to which a controlled amount of water is added during its application using a rendering and plastering machine. It is applied as a single coat render without the need for a scratch coat for most applications and is available in a range of colours. Overall thickness of 15, 20 or 25mm if ashlar detailing is required. Monocouche renders are available in a range of surface finishes, textures, and colours, details of which are available on request.

Monocouche through colour renders are specially designed for weatherproofing external concrete, concrete blockwork, lightweight blockwork, brickwork and other masonry substrates together with the Monocouche range of external insulation systems. They are also suitable for using as an internal decorative render.

Surface preparation requirements for coloured renders are the same as for ordinary sand and cement renders. Codes of practise for external renderings like BS 5262, DTU 26.1 and DTU 20.1 (french normes) have to be followed.

It is recommended that the masonry or concrete substrate should be allowed to dry out for a minimum of 30 days after construction before the application of the render.

Only clean water should be used for mixing with the renders.

Scaffolding must be independently tied to allow uninterrupted application.

Protection must be provided when applying coloured renders in rain or other inclement weather. Application should be reconsidered in temperatures below 5°C and above 35°C.

Cement / Lime products should not be applied to substrates which are frost laden or which have recently been subject to prolonged rain. Do not render onto saturated substrates as this may affect the bond strength and cause lime bloom (discolouration), salts to occur and patchiness due to uneven suction.

Local weather and site conditions must be taken into account by the applicator before any cement/ Lime product is applied.

The quantity of material required for a given area should be from the same batch reference or be thoroughly mixed together in order to obtain a uniform colour.

When applying in hot weather, it is advisable that work coincides with the shaded areas of the building. During longer periods of hot and dry weather it may be appropriate to apply an even mist spray of clean water to the substrate before application and to surface finish for a couple of days afterwards subject to site conditions.

## STORAGE

Cement/ lime based products must be stored off the ground, under cover and in dry conditions.

## SUBSTRATES

### CONCRETE BLOCK

Concrete blocks can generally have the single coat render applied as a one coat application with no key coat required. However due to the range of block manufacturers, please advise which block is being proposed for further specification clarification.

Highly porous materials, or lightweight blocks (Aerated Autoclaved Concrete) should first be prepared by lightly spraying the area to be rendered with clean water to reduce water suction. (Care should be taken to avoid excessive watering as saturating the block will increase drying shrinkage and could induce cracking, which may be reflected within the finished render). Immediately after damping the wall, spray or brush apply a surface sealer coat comprising of 1 part porosity regulator solution to 4 parts clean water, leave to dry and then apply the single coat Monocouche render. Please be aware: there is the possibility of general blockwork cracking if the mortar joint strength is greater.

To reduce the risk of the façade cracking at high stress locations, particularly on new build construction, it is recommended that any likely stress fracture locations, for example windows and doors and crack inducing points such as weep vents, receive a minimum of 2sqm section of fibreglass mesh. This material alone will not prevent cracking, it is only included as an additional precaution to well constructed and reinforced substrate materials.

Where existing masonry has cracked, or where the abutment of two forms of masonry meet e.g. a rear concrete block extension against a brick house, it is recommended that this is first repaired/reinforced using a retrofit bed joint reinforcement solution or by creating a movement joint. When this has been completed, the reinforcement mesh should be applied a minimum of 500mm past the line of the cracking in all directions.

The mesh should not be mechanically fixed but fully embedded and bonded within the render during the initial application.

The reinforcement mesh application must follow the manufacturer instructions.

## PREPARATION

All surfaces must be clean, suitably dry, sound and free from anything that may interfere with the adhesion of the material to be applied.

## ARISES AND FEATURE STOPS

As soon as the proposed finish has been completed (generally the scraped finish) and while the render is still green, mark out the Ashlar cuts using a chalk line and timber batten or similar and run the cutter along the batten to the required depth. (Ensure the chalk line is removed by the cutting process).

Care should be taken with detailing to avoid highlighting inaccuracies in alignment and levels particularly around windows and doors which occur in the same plane. As guidance, keeping cuts about 50mm down from the head and 50mm up from the sill base will assist in disguising inaccuracies along these points and keep Ashlar lines away from any defined features such as transoms.

Please note: Where Ashlar cuts are required the finished render must maintain a minimum thickness of 15mm at the base of the cut.

For guidance on different decorative finishes please contact Manufacturer.

## MASKING

Masking should be used to give protection to adjacent work and to give clean straight edges. It should be removed immediately after finishing.

## CEMENT / LIME PRODUCTS

Remove splashes of material from glass or aluminium immediately as they may etch the surface and leave a permanent mark.

## MONOCOUCHE (SCRAPED FINISH)

The coloured render is designed to be applied using a spray machine (PUTZMEISTER, LANCY, PFT,...) for time saving, mixing quality (see manufacturer instructions for mixing time) and efficiency. Nevertheless, the coloured render is suitable for hand application.

The minimum finished thickness is 15mm. Depending on background quality.

When sufficiently hard, normally between 3-16 hours, this may vary depending on substrate and drying conditions, scrape the surface in small circular motions using a scraping tool. Remove no more than 3mm from the surface, this must remove any laitance and bring the application to the specified finished thickness.

After scraping, any dust on the surface must be removed by brushing with a clean soft bristle brush. Errors must be corrected at this stage as rectification at a later date is not practical.

## CURING

Care must be taken to protect cement products soon after the application from rapid freezing and heavy rainfall. For other drying conditions i.e. where there is direct exposure to sunlight or drying winds, the render may require to be kept evenly damp for about 3 – 4 days by lightly spraying periodically with clean water. This process is important to ensure complete hydration of the cement and the lime can take place.

## LIME BLOOM

As the cement sets, lime salts are produced and can migrate to the surface. This is a normal situation when using such kind of product. This may appear mainly in humid conditions and more often during the winter period. The lime bloom does not affect the technical properties of the coloured renders and can be removed using a light acid cleaning solution (5 to 10%) to be used 30 days after the lime bloom appearance.

For further information, please refer to manufacturer instructions on our website.

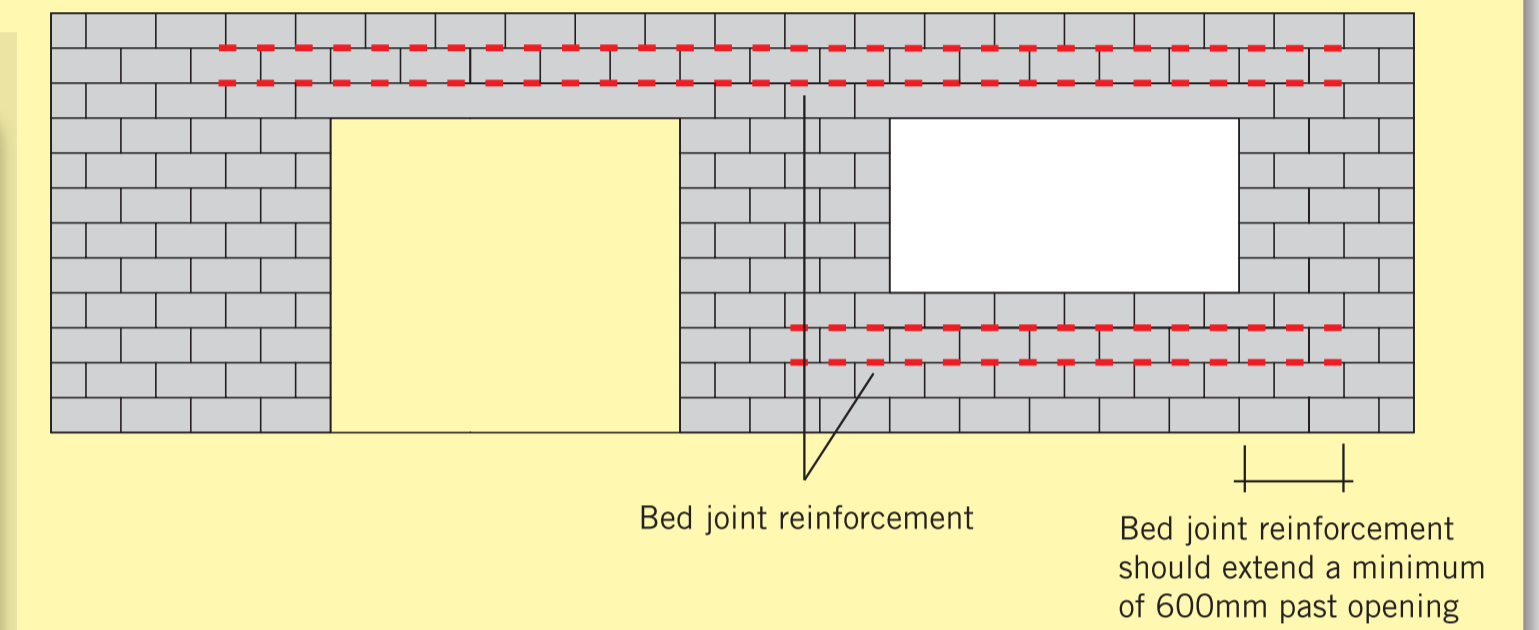
## PROVISION FOR MOVEMENT

The amount of movement to be expected is related to the moisture content of the materials, the ability of the masonry to carbonate after construction, and the ambient temperature during construction. Unless slip planes are provided, longitudinal movement in loadbearing masonry is likely to be less than that in non-loadbearing masonry because of the restraint provided by the structure.

Whilst it is possible to calculate the likely level of movement and then to design for it, the number of variables involved make calculation complex; it is more usual to:

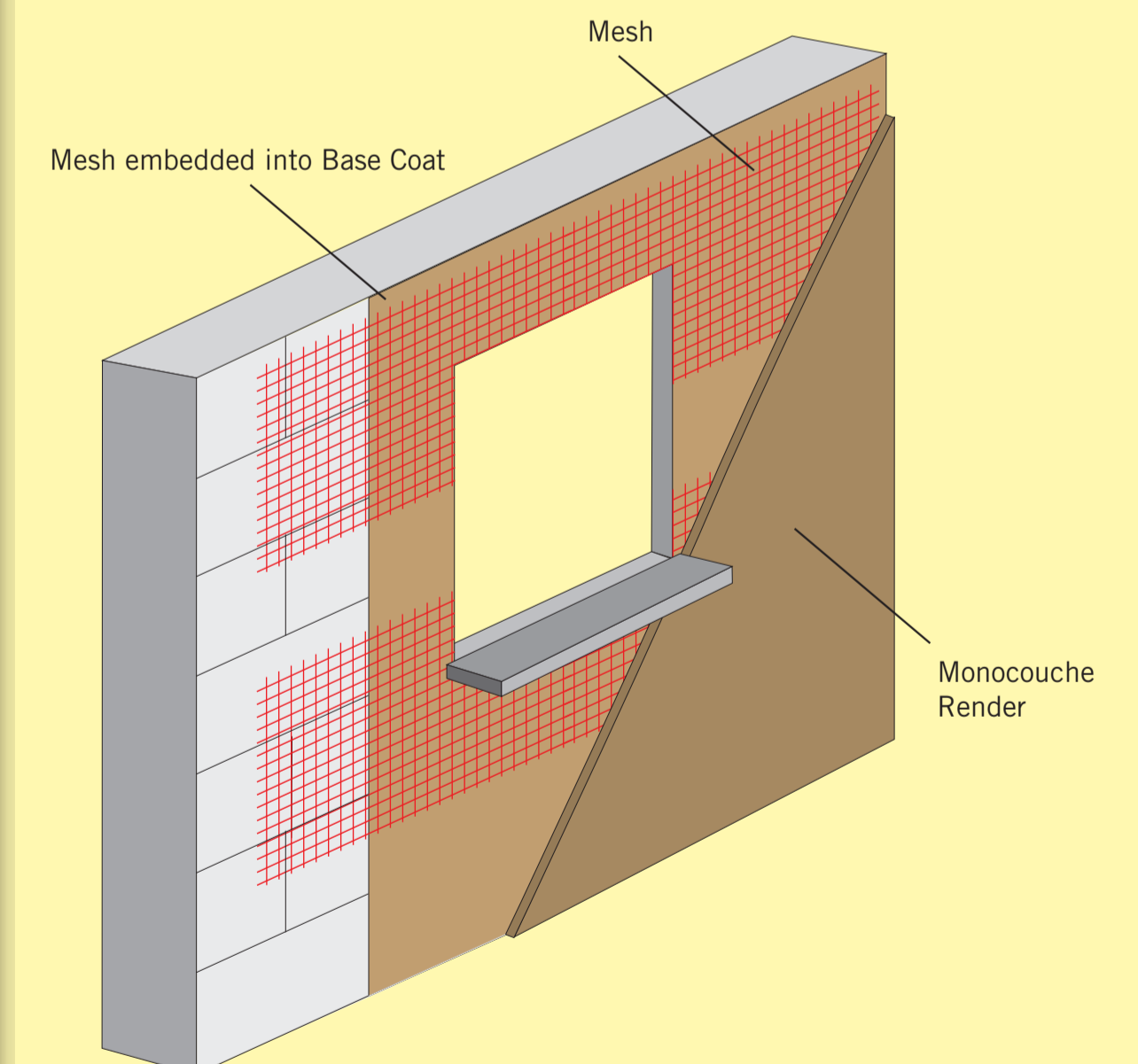
- divide masonry into a series of discrete panels, separated by joints which allow movement of the panels, and/or
- restrict movement by using bed joint reinforcement. Internal walls in single occupancy dwellings do not normally require movement joints; any small movement cracks are made good after the building has dried out.

Cracking of the substrate can be significantly reduced by introducing bed joint reinforcement within the mortar. Ideally this should be applied throughout the building during construction and in accordance with the substrate manufacturer's recommendations. As a general guidance, reinforcement is generally placed every 450mm centres vertically (every 2 blocks) for masonry panels between 6 and 9m long. For masonry panels between 9 and 12m the reinforcement should be placed every 225mm centres (every block course). Please ensure that the reinforcement is continuous, joints are lapped in accordance with the manufacturers requirements, generally 450mm laps and continued around corners.



## FIBRE MESH REINFORCEMENT

To reduce the risk of the facade cracking on new build construction it is recommended that any likely stress point areas, for example, around windows and doors receive a 2m<sup>2</sup> sheet fibre glass mesh. In extreme cases, where the block is uneven and out of level, more commonly on renovation work, it may be advisable to apply a base coat and completely mesh the entire facade. It is very important that no mechanical fixing is used for this operation.



## JOINTS TO ACCOMMODATE HORIZONTAL MOVEMENT

Movement joints should be considered at the following locations:

- at regular spacings in long runs of walling;
- above and below openings;
- at changes in wall height;
- at changes in wall thickness;
- at junctions with dissimilar materials;
- to coincide with movement joints in other parts of the construction.