



Lightweight Two-Coat Silicone Render System onto Render Carrier Board

STEP 1

Substrate Preparation

As with any construction project, preparation is extremely important. Before applying the render, the substrate needs to be examined and the render carrier boards need to be installed.

The cement particle or magnesium oxide board needs to be correctly installed, as per the manufacturer's, specification onto either a light steel or a timber frame. Check the manufacturer's specification for joint spacing and taping between the joints. Ensure that the fixings are structurally stable and properly adhered to.



STEP 2

Ventilated Cavities & Insect Mesh

Prior to the application of any reinforcing basecoats, the correct beading must be installed. On a ventilated cavity system, the boards normally sit at 600mm or 400mm centres with an air gap of at least 25mm behind. Any air cavity must be left uninhibited to allow for proper drainage, while at the same time safeguarded against any insect infestations. Install a ventilated bead or insect mesh between the spacing to reduce this risk.

STEP 3

Installing the beading

Beading is used in the EWI Pro thin coat render systems to reinforce areas that are likely to experience impact (e.g. external corners) and to try to direct water away from the surface of the render by providing a drip. All of our beading is uPVC and therefore will not rust. Cut beads to the required length and embed them into the basecoat layer.

The RCB tray (12mm) should be housed at the bottom of the boards. Take the clip-on drip bead (6mm or 10mm) and slot this onto the front of the RCB tray to create a natural bell drip. Repeat this process so that the base perimeter of the boards is completely covered.

Next, install corner beads with mesh onto any external corners, including elevation corners and around windows and openings.

To install the beading ensure that you use some of the premixed basecoat rather than any foam adhesive or pink grip. Simply mix EWI-225 Premium Basecoat with the appropriate quantity of water. Leave the adhesive for 5 minutes and then apply the product over the beading mesh to adhere it to the substrate. Repeat this process for all corners.

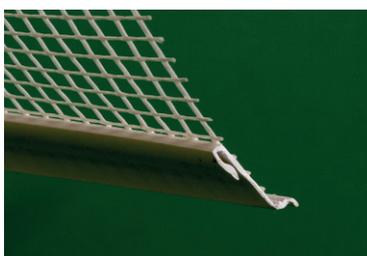
To minimise the use of mastics around windows and the final render finish, consider using the APU or EWI Pro Reveal Bead. This will ensure 100% mechanical adhesion rather than depending upon silicone sealants which tend to wear away over time.

The following are different types of beads that may be required for the render carrier board system.



RENDER CARRIER BOARD (RCB) TRAY

The RCB tray can be used at the top and bottom of the render carrier boards with either a Clip-on Drip (EWI-66012) or Clip-on Stop (EWI-66011).



CLIP-ON DRIP

The clip-on drip attaches to the front of the RCB tray and helps to tie the RCB tray into the render system. It also has a drip profile to help prevent water ingress at the base of the render system.



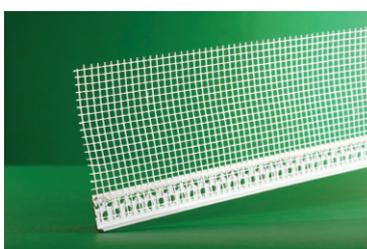
CLIP-ON STOP

This attaches to the front of the RCB tray to provide a clean finish at the base of the system.



CORNER BEADS

Corner bead should be used on every external corner to help reinforce this area. The corner bead also helps achieve a consistent 90° angle at the corner.



STOP BEADS

Stop bead is used to achieve a defined termination point where the render comes to an end, for example between mid-terrace properties.



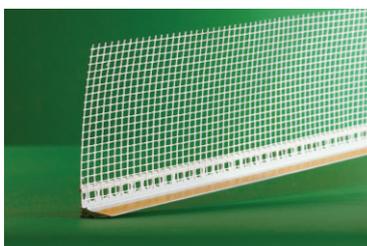
FLEXIBLE UPVC ARCH BEAD

Flexible uPVC arch bead is used to form perfect arches by matching the contours of the arch.



MOVEMENT BEADS

Movement beads are installed within the basecoat directly above expansion joints for a neat finish. They can also be used for long runs of render (7 metres) to reduce the risk of cracking



WINDOW REVEAL BEAD

The reveal bead is used around windows to provide a tidier finish. The bead is used on vertical reveals, as well as horizontal. The reveal bead has a removable tab to create a tidy finish.



WINDOW HEADER BEAD

The drip on this bead ensures that water will be directed onto the windowsill. The bead has two mesh wings, which are embedded into the basecoat layer.



FLEXIBLE CORNER BEAD

Flexible corner bead allows you to reinforce angles that are not 90 degrees. The corner bead comes in long 25-metre strips, and helps provide additional strength.

STEP 4

Preparing the Basecoat Layer

Once the beading is in position, the basecoat reinforcement layer is installed (remember the beads are completely embedded within the basecoat so are not visible).

For this stage you need to use the EWI-225 Premium Basecoat which is trowelled onto the substrate before strips of Fibreglass Mesh are embedded within it. Our Fibreglass Mesh is available in 50m² rolls in either 165g/m² (EWI-66645) or 150g/m² (EWI-66640).

Correct preparation of the EWI-225 Premium Basecoat is very important. EWI-225 Premium Basecoat should be mixed with clean, potable water at a ratio of 6.5 litres per 25kg bag. The Premium Basecoat should be mixed using a heavy-duty power plaster mixer on a slow rotating setting.

Freshly mixed compound should be left for approximately 5 minutes and then re-mixed for a short period of time before use. Bucket life is approximately 1 hour, although this is dependent upon the weather conditions.

MATERIALS REQUIRED

EWI-225 - Premium Basecoat
EWI-66640 or EWI-66645 - Fibreglass Mesh



STEP 6

Applying the Basecoat Layer

The basecoat can be applied as either a one pass or two pass application with Fibreglass Mesh embedded within it.

One Pass Application

The one pass system should be applied with a notched trowel to the substrate at a thickness of 6-8mm. The mesh is then embedded within the basecoat in vertical strips using the flat edge of a notched trowel. Each strip of Fibreglass Mesh should overlap its neighbouring strip by approximately 10-15cm. The EWI-225 Premium Basecoat can be ruled off with a speed skim or sponge floated for a completely flat finish.

Two Pass Application

The two-pass system should be applied with a notched trowel to the substrate - this layer needs to be between 3-4mm. The mesh is then placed onto the basecoat in vertical strips and embedded using the flat edge of a notched trowel. Another coat of basecoat should be applied onto the mesh at a thickness of 3-4mm before the first coat has gone off. The EWI-225 Premium Basecoat can be ruled off with a speed skim or sponge floated for a completely flat finish.

STEP 6**Priming before Rendering**

Once the basecoat reinforcement layer has dried for a period of 24-48 hours (depending upon the weather conditions), it needs to be primed prior to applying the render. The Topcoat Primer (EWI-333) is simply painted on top of the basecoat reinforcement layer using either a paintbrush or a roller.

It will need to be left to dry for 12-24 hours prior to rendering. The primer is also through-coloured with the same tint as the topcoat. This is to avoid staining on the topcoat and to ensure the final colour fully comes through on the rendering finish.

MATERIALS REQUIRED

EWI-333- Topcoat Primer

**STEP 7****Rendering the Walls**

We recommend using one of our silicone renders when rendering ICF. We offer four types of silicone render – please speak to your supplier for more details about the differences.



EWI-040 Silicone Silicate Render



EWI-075 Silicone Render



EWI-076 Premium Bio Silicone Render



EWI-077 Nano Drex Silicone Render

Each of these renders comes in different grain sizes – 1mm, 1.5mm, 2mm and 3mm.

Using a trowel, apply a thin layer of the render to primed surface. With granulated thin coat renders, remember to match the thickness of the render application to the grain size - so with a grain size of 1mm the render will need to be applied at a 1mm thickness.

Once the render has been applied, smooth it out using a trowel, removing any excess off the wall to ensure an extremely thin layer (one grain

thick). Using a PVC float, work the render in circular movements - this will provide a textured finish. Remember to have enough tradesmen on-site to ensure that whole sections of the walls can be done at the same time. If you attempt to do 'half a wall' at a time, you will notice scarring where the two render sections meet.

If the render is tinted, then please check the bucket to ensure that it is the colour you are expecting (ideally compare this back to a sample pot). It is also recommended to mix 3 buckets of render into one large bucket at a time, topping up and re-mixing regularly. This will ensure consistency in colour and any minor discrepancies will be blended out across the façade.

Note: please do not water down the render.

EWI Pro External Wall Insulation System

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