

## 5) Working Time

The time interval between application and finishing of Hebel Render is dependant on many factors including air temperature, humidity, wind conditions, the surface moisture content of the blocks, thickness of application etc. Experienced judgment will determine the appropriate working time for each situation. As a guide, the pot life of Hebel Render is four hours at 25°C and 50% humidity; however, initial stiffening can commence almost immediately, especially on thin 3mm skim coats.

## 6) Curing

During warm or very dry conditions, assist curing by dampening the render using a fine mist spray, starting as soon as the surface is firm. Care should be taken to dampen the wall just enough to darken it. Do not allow the water to run down the wall. Re-wet the wall periodically for at least another 24 hours. Allow one day per mm of render thickness to dry out and reveal any latent defect. Only then should paint finishes be applied.

Do not apply the fibreglass mesh directly onto the Hebel substrate; it should be troweled into the first skim coat. The type of fibreglass mesh recommended is alkali-resistant, with 5mm grid openings for both internal and external surfaces. Suitable mesh is available from your nearest Hebel distributor in 200mm or 330mm wide rolls. Alternatively the entire wall can be meshed with sheets of fibreglass grid mesh.



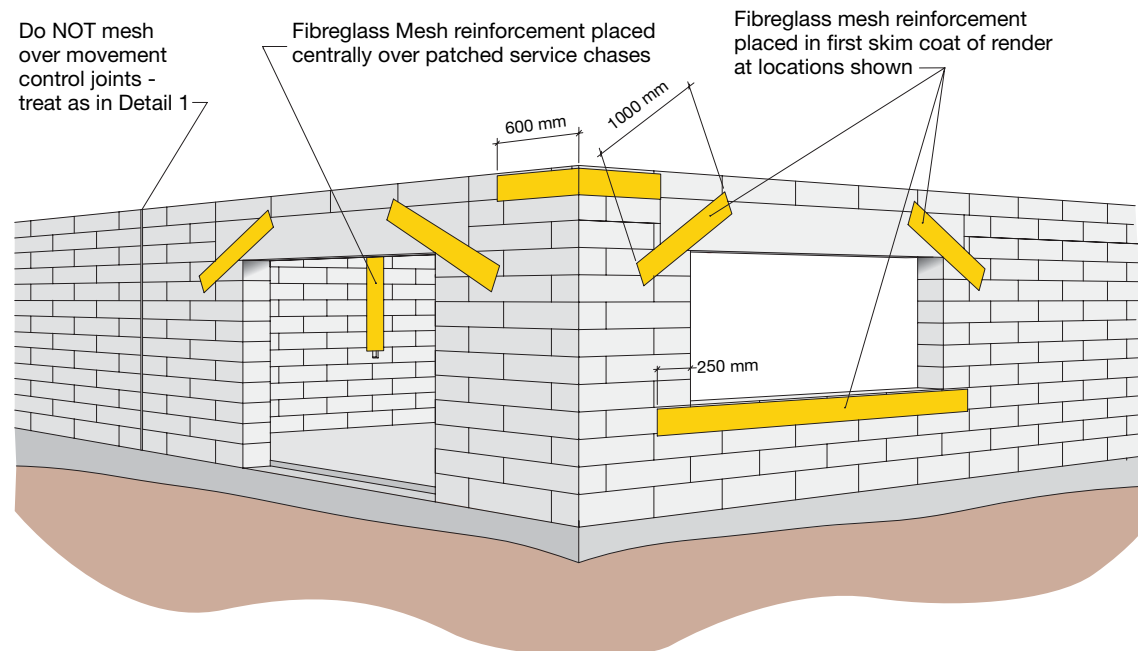
## Reinforcement

### 1) Reinforcing Mesh - Hebel Blockwork

The use of alkali-resistant fibreglass mesh is required at corners of wall openings (doors and windows) to minimise corner cracking, along sills and at the top of external corners. Mesh should also be applied over patched service chasings. The mesh should be positioned centrally in the render, across the possible direction of the crack and extending at least 100mm on both sides. For typical positioning of mesh, see Detail 2.

### 2) Reinforcing Mesh- Hebel Panel Cladding

When applying Hebel Render to Hebel cladding panels, all vertical panel joints must be meshed, unless the joint is a control joint (see notes on control joints). Alternatively, full sheet meshing can be used. If the Hebel Render is to be applied in two even coats, bed the mesh into the first coat, as it is applied. Alternatively, just render and mesh the joints, and then apply the full coat of render to the face of the sheets in a 5-8mm single coat (covering the rendered and meshed joints).



Detail 2. Typical locations of fibreglass reinforcing mesh

## Surface Treatments

Hebel Render is designed to be water resistant, however, like all cement renders it should be painted with an acrylic paint to ensure that any hairline micro fissures are concealed and do not become points of moisture ingress.

### Paint Finishes

Paint finishes over rendered Hebel walls should only be acrylic based to allow the building to breathe by letting vapour pass through. Oil or bitumen based paints should not be used except in areas where moisture vapour barriers are required.

The acrylic coatings can have a variety of textures; from spray applied paints through to the high build roll-on and trowel-on acrylic systems. A test panel is recommended on the project to establish the reference standard of finish. Ensure the render is dried out and proven to be fault free prior to application of the final paint coats. Also ensure the final coating system is suitable for application to cement-based render. Consult the paint manufacturer for application directions.

### Coloured Oxide Dyes

Colouring Hebel Render for external walls, using oxides or dyes, is **not** recommended as there is no flexible skin of paint to combat moisture ingress into micro fissures.

If a flexible clear sealer and oxide tint combination are desired, it is important to note that this type of application will typically produce a 'Tuscany' or 'washed' type of finish (not a uniform finish), as the colour will vary slightly due to the mixing and finishing process. Leaching of salts and oxides can cause undesirable mottles, runs, stains and blotches.

Acrylic paint is the only recommended way of applying colour to Hebel Render.



## Health and Safety

Hebel Render, like all freshly mixed cement products, can cause alkaline burning and may cause other irritations such as dermatitis. Avoid skin contact by wearing suitable clothes. Gloves and goggles are recommended. Wash immediately if there is any contact with eyes. Wash regularly any other skin contact. If irritation persists seek medical advice. To prevent back injuries lift bags correctly. Refer to the product safety information sheet for this product **before** using it. It contains important information on safe handling and possible hazards.



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# Hebel RENDER

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The perfect plaster  
finish for your  
quality Hebel home

# Hebel RENDER

## What is Hebel Render ?

Hebel Render is a sand and cement based plaster coating used to finish autoclaved aerated concrete surfaces. It can be applied both internally and externally, producing a high quality finish with relative ease at a reasonable price. Delivered in 20kg bags, it eliminates the mess of loose bulk materials, simplifies handling and reduces clean up.

Typically, site-mixed sand/cement renders suffer from variations in the properties of the sand and in the proportions of the ingredients, including special additives. Designed to overcome these intrinsic failings of on-site render mixing, Hebel Render is a quality controlled factory-made plaster, with physical characteristics designed to match Hebel Autoclaved Aerated Concrete (AAC).

## Benefits

- Hebel Render has similar tensile and comprehensive strengths to Hebel AAC blocks and panels, reducing the possibility of differential movement cracking.
- Hebel Render has excellent workability and flows evenly off the trowel.
- Good adhesion to Hebel AAC blocks and panels.
- Good water retention to ensure proper curing.
- Vapour permeability to match the Hebel AAC substrate.
- Hebel Render complies with New Zealand Standard 4251 Part 1 (1998) and Australian Standard AS-CA27-1959 for solid plaster materials.
- Hebel Render need only be 5-8mm thick to achieve a quality finish. This is usually in two coats of about 3-4mm each.
- In some cases a single thick coat is possible.

## Ingredients

- **Sand** is quarried from high silica content sources and factory graded. This forms the base ingredient and gives the render it's natural colouring. This may vary slightly between batches.
- **Cement** is of a light coloured Portland variety to bind the sand.
- **Lime** helps the binding reaction.
- **Cellulose fibres** have been added to improve resistance to fine micro cracking during the drying phase.

- **Selected plasticisers** give the render improved workability for ease of application and flow off the trowel.
- **Water entraining compounds** resist the initial suction of moisture into the AAC and allow the render mixture to hydrate properly when placed over Hebel blocks or panels.



Note: Packaging may vary in appearance

## Storage

Bags of Hebel Render should be stored under cover, above ground and protected from water damage. Like all cement based powder products, once the cement content has hydrated (been mixed with water and formed hard lumps) the product cannot be used. If there is doubt over the age or storage conditions, the applicator should establish the working properties by doing a sample test panel to verify that it is lump free and setting properly. As a guide, Hebel Render has a shelf life of six months, with the date printed on the bag.

## Use over Hebel Blocks and Structural Wall Panels

As a rigid, non-flexible plaster, Hebel Render is mainly used over Hebel block work, as this substrate is very stable in its dimensions, with limited scope for movement. However, block walls thinner than 150mm should instead be lined with plasterboard as they are more susceptible to movement cracks caused by impact loads, slamming doors, etc.

Structural wall panels, (150mm thick and greater) also provide a good stable base for Hebel Render.

## Use over Hebel Panel Cladding on Framed Buildings

Usually, if flat finishes are required on timber framed buildings clad with Hebel panel, elastomeric acrylic texture coats are specified, instead of render. These comparatively flexible coatings accommodate the greater movement experienced by timber-framed walls due to shrinkage, warping and swelling.

Hebel Render can be used as a substrate for acrylic texture coats on Hebel panel cladding veneers where undulation or heavy texturing is required, as these are easier to create with a cementitious plaster such as Hebel Render.

Hebel Render is not flexible. It is especially important when rendering a timber framed building that a thick acrylic membrane or paint is applied over the Hebel Render, as timber framed buildings experience greater movement than a block building. Acrylic paint can span most micro cracking caused by normal daily movement.

Designers may consider increasing the number of movement control joints in a Hebel panel clad building which is to be rendered and painted rather than coated with an acrylic plaster system.

## Use over other substrates

Hebel Render is specifically designed to be applied to AAC surfaces. If other substrates such as foundation concrete, fibre cement or dense concrete blocks are to be rendered, plasterers must do a test panel to satisfy themselves as to suitability. Special attention should be paid to initial absorption, suction and slump. A control joint is mandatory between differing substrates.

Steel, timber or flexible substrates should not be rendered due to the likelihood of delamination and cracking.

## Wall Preparation

### 1) Patching

Prior to rendering, the wall surfaces should be level and smooth enough for the plasterer to apply a good finish. All chipped blocks or damaged panel edges should be patched with Hebel Render or by using excess Thin Bed Adhesive mixed to a thick paste by adding Hebel dust. Allow the patched area to dry fully then sand flush. Level any proud blocks with a leveling plane or sanding float.

### 2) Cleaning

Scrape off adhesive runs, surface lumps and remove all foreign contaminants that affect the cover or adhesion of the render. Brush with a stiff bristle broom to remove all loose particles.

Note: the block layer should have adhesive runs scraped off during laying, as it is easier to remove when moist than when cured.

### 3) Moisture Content

Walls that have been dampened by rain or slab hosing need to dry out for at least one day before application of render. Blocks or panels that have been fully saturated to the core may need many days to dry out enough to render. It is important therefore to have the top of block walls covered during construction and not to allow ponding of rain inside the building to excessively soak into the block. (Note: Render applied over wet blocks may crack due to differential drying rates and slight shrinkage of the blocks.)

If the Hebel AAC has been exposed to water or extreme weather for a long time, the surface may become slightly powdery. This should be brushed off prior to render applications.

### 4) Beading

Angle beading made from PVC, galvanized or stainless steel can be used on corners and edges. It must be positioned straight and true, giving a minimum render cover of 5mm. Beading must be corrosion resistant and be securely fixed using either flat head corrosion resistant nails or a skim coat of render. Other beading for such purposes as archways, large radius corners and other areas are also commercially available.

Suppliers of beading should be consulted for their recommendations on appropriate beading for specific applications and environmental conditions. Galvanised steel beading should be treated with a corrosion inhibitor to avoid any potential rusting problems. Plastic or stainless steel beading is recommended in external environments and essential in coastal regions.

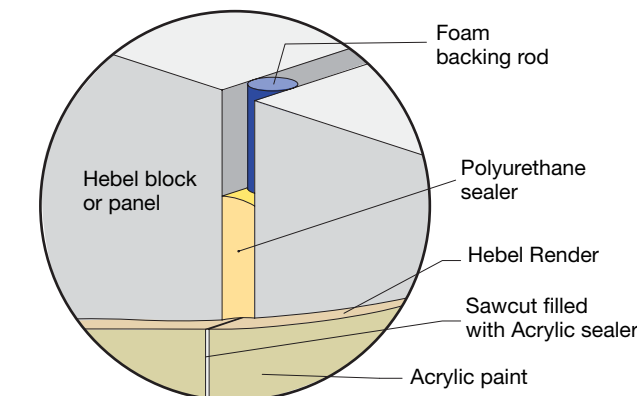


### 5) Pre-wetting

Dampening down the wall should not be necessary, as Hebel Render will retain workability under most conditions. However during very hot, dry or windy conditions, pre-wetting of the wall may be necessary. If conditions force pre-wetting, use only a fine mist spray. Under extreme conditions of dryness or wind, rendering should be deferred. Do not wet internal walls. Remember, Hebel Render has a water entraining ingredient. Excessive wetting will cause it to slump when applied.

### 6) Control Joints

Control Joints are nominally 10mm wide, full height, full thickness gaps in the block wall or panel veneer, constructed in accordance with the Hebel technical literature. These are at the designated movement points in the building. As such, they must be fitted with a polyethylene foam (PEF) backing rod or similar and sealant to ensure the joint is watertight in the event of coating movement along the line of the joint. The sealant surface must be flush with the adjacent Hebel surface and the render coating must be cut full depth back to this sealant, either with a knife whilst the render is wet, or with a grinder or power saw once cured. See Detail 1.



Detail 1. Movement Control Joint Detail

## Application

### 1) Coverage

Coverage depends on thickness and is approximately 2.5m<sup>2</sup> to 1.6m<sup>2</sup> per 20kg bag for recommended finished thickness range of 5mm to 8mm.

### 2) Render Thickness

Hebel Render can be either troweled on by hand or mechanically sprayed to the recommended thickness of 5-8 mm. This can be applied as a single coat for slightly undulated finishes, but two coats of 3-4mm each will give a smoother finish and allow embedment of any reinforcing mesh between the coats. The final coat can be applied as soon as the first has started to stiffen ( this



can be 15-20 minutes, but in cool, humid environs, could be over 24 hours.

Where a heavily undulated surface is required, a thicker build up should be carried out in two or more coats, each being within recommended thickness. Each base coat applied should be well scratched to provide a mechanical key and allowed to begin stiffening before a subsequent coat is applied. Smooth finishes are easily achieved with the minimum 5-8mm coating. Steel, plastic or timber floats and trowels can all be used depending upon the desired finish effect.

### 3) Climate

Avoid temperatures below +5°C and above +30°C over the period of application and initial curing (2-5 days). Protect against rain until the render sets.

During hot sunny weather, organize the sequence of the work to follow the sun around the building if possible. That is, try to render when the sun leaves a wall and it is in shade, allowing the freshly applied render as much time as possible without direct sunlight. Avoid rendering during extremely windy or dry conditions as this will also cause fine surface fissures to form if the skin of the render dries faster than the base layers.

### 4) Mixing

Hebel Render contains special modifiers and therefore machine mixing is recommended to ensure these are evenly blended throughout the mix. Use, for example, a drill mixer with a bucket for small amounts or a concrete or plaster mixer for larger volumes. Add 5-6 litres of water to a bag, mix thoroughly and allow to stand for 10-15 minutes. Remix immediately prior to application.