



Substrate Preparation and Product Application Information

For RSA Cement Renders Over Masonry Substrates

Masonry Render, Traditional Render and EP Render are all suitable for application over the following correctly prepared clay bricks and concrete blocks

PREPARATION

Cleaning:- Ensure all surfaces to be coated are sound, clean, dry, free from dust, oil, release agents, loose material, efflorescence and/or other contaminants. Remove all mortar dags and protrusions and either brush down with a stiff broom or wash/pressure clean substrate as required, prior to the application of any products.

Masking:- For all surfaces not to be coated (windows, doors, roofs, finished floors etc) we recommend masking, covering or otherwise protecting the surface prior to any application. **Note:** For masking, we recommend only the use of high quality long life masking products.

Cleaning During Application:- Should any render get onto surfaces that are not to be coated, clean the surface immediately with clean water. It is the applicators responsibility to use the correct cleaning technique and product/s for each surface and to ensure the product is removed without damaging the surface. **Note:** The clean up process must be carried out during each stage of the application of product/s.

SUBSTRATE CHECK

Ensure the substrate has been installed in accordance with the manufacturer's instructions and good building practices, paying particular attention to the positioning of control joints. Check the 'damp proofing' product at DPC level, is flush or protruding past the face of the brick/blockwork. Also ensure that all weep holes are positioned correctly are free from 'brickies' mortar. Assess straightness of the substrate and pack out walls as required using RSA render or bring to the attention of the client or project manager for rectification of the substrate prior to application of render. The success and integrity of the coating system is dependant on the quality and installation of the substrate.

SUBSTRATE PREPARATION AND HYDRATION

Correct treatment of the building substrate and hydration of cement based products assists the development of high early hardness, reduces the likelihood of shrinkage cracking and assists the render to achieve full strength and long term integrity when applied correctly. The hydration process starts prior to the application of render coats by using the correct substrate preparation technique.

It is absolutely critical to correctly seal or hydrate all masonry surfaces prior to the application of render coats, as this limits water loss from the render to the substrate. In turn, it also keeps the water in the freshly applied render (reducing the likelihood of 'plastic shrinkage cracking') and eliminates the need to cure the render after application.* See CURING section.

Best results are achieved when the substrate has been stabilised and uniformity of porosity has been achieved prior to the application of render coats. This is simply and economically achieved by sealing the substrate.



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Sealing

Highly absorbent bricks and blocks must be sealed with a 1:1 mix of *RSA Render Bond* and water (e.g. into a 15 litre bucket pour 6 litres of water and add to the water 6 litres of *Render Bond* and stir with a mechanical mixer). Best results are achieved when the sealer is applied at least 24 hours prior to the render application.

Hydration of Absorbent Dry Masonry

The masonry substrate must be soaked/'hydrated' with clean water until the water beads and runs off the surface. Application of render may commence once the free water has been absorbed into the surface and the 'shine' has gone from the wall. Alternatively seal substrate as detailed above.

CORNER BEADS AND TRIMS

For detailed installation information refer to the RSA document - *Substrate Preparation and Application for Bead, Mesh, Trim and Skim Applications Using Set and Prep*.

Note:- Corner beads and trims must stop 5mm above termite/damp proof barrier. Corners below this point can be formed either by freehand or by installing a corner bead 5mm below termite/damp proof barrier. This will then create a 10mm gap on the corner beads.

3.5, 4.5, 6 or 10mm corner beads and trims can be installed on clay brick and concrete block substrates, or may be required as part of a substrate coating specification. In either case, *RSA Set and Prep must be used to install* high quality, RSA approved, UV resistant PVC corner beads and trims

Note: 2.5mm beads and trims should not be used on masonry substrates. 2.5mm beads and trims are only suitable for use on fibre cement (FC) sheeting. FC sheeting will be rendered with pure acrylic renders or textures. The pure acrylic renders and textures have the ability to perform at 1-1.5mm thickness - which is the actual applied coating thickness over the wings of 2.5mm beads and trims. No commonly used cement based render is designed to be applied at this minimal thickness.

MIXING RENDER

Note:- If the mixing process is not followed the render may:-

- **Set up fast and be difficult to apply.**
- **'Go off' too quickly on the wall.**
- **Be difficult to float and finish.**

1. For pump use, mix the render according to the pump manufacturer's recommendations. If the machine requires you to add dry mix please do so. For wet mix machines refer to point two below.



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2. Slowly add render to 3.7 to 4 litres of clean potable water whilst vigorously stirring with a suitable mechanical mixer (drill and paddle).
3. **Mix the render for at least 3 minutes to activate additives.**
4. **Allow render to stand for a minimum of 5 minutes to ensure that the chemical reaction of additives occurs.**
5. Remix the render for one minute whilst adjusting the consistency (by adding water or render).

Pot life:- The pot life of mixed render when left in the shade is 2-2.5 hours.

APPLICATION INFORMATION

All RSA renders can be applied in one or multiple coats depending on substrate requirements. For single coat applications, it is important to note that if floating is done too early:-

- shrinkage may occur - highlighting mortar joints, substrate imperfections whilst promoting “plastic shrinkage cracks” in the finish
- the bond of the render to the substrate may be reduced or can be eliminated completely resulting in unsound ‘drummy’ sections of render.

Hand Trowel

All RSA Renders are ideal for all hand trowel applications and are designed to be easy to apply, straighten, screed and float finish. Due to the extended pot life/‘hang time’ of the product the plastering crew can mix more bags at a time, apply and finish more area and enjoy increased productivity, render strength and integrity.

Render Pump

All RSA Renders are ideal for all machine (render pump) applications and are designed to pump consistently, respond well to darbying and screeding and remain easy to float. Due to the extended pot life/‘hang time’ of the product the plastering crew can apply and finish more area and enjoy increased productivity, render strength and integrity.

Application Over Correctly Prepared, Hydrated or Sealed Masonry

All RSA Renders can be applied in one coat or in multiple coats depending on substrate condition, level of finish required and the skills and knowledge of the Solid Plasterer.

Render can be applied in even thicknesses from 4mm to 10mm per coat. Subsequent coats can be applied to build depth if required to a maximum total thickness of 20mm allowing adequate drying time between coats (approx. 4-8 hours). For applications where total render thickness exceeds 12mm, add 5% *Render Bond* (200ml per 4 litres of water) to each coat.



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Notes:

- Total render coating thickness must not exceed 20mm.
- Control/expansion/movement joints in all substrate must be carried through the trowel-on coating system to a minimum width of 10mm. A control joint **must be formed at damp proofing/termite barrier level**. Care must be taken to completely 'disc' through one day old render, whilst taking care to not damage damp proofing or termite barrier.
- As per standard solid plastering practice it is important to **apply render in even coats** e.g. 4-6 or 6-8mm. **Do not apply from 4-10mm in a single coat** to remedy poor substrate straightness. When render is applied at varying thicknesses on the same surface the render will dry out at different rates increasing the chances of 'plastic shrinkage cracking' in the render finish

*CURING

Due to the sealing or hydrating of the substrate prior to application of render, curing is only necessary when it is applied in hot, dry (low humidity) and/or windy conditions and where high early/overnight hardness of the finish has not been achieved. In these instances it is necessary to assist the curing process by soaking the render once or twice a day for the first two days.

OVER-COATING

When over-coating with RSA trowel-on acrylic renders or textures, application may commence 24 hours after completion of render. Prior to the application of RSA paints such as *955 Impact Paint* or roll on texture coatings the substrate must contain less than 15% Wood Moisture Equivalent (WME).

CLEAN UP

Clean all equipment immediately with water.

LIMITATIONS

When applied as a thin section render the product cannot be expected to hide substrate imperfections. The products will not remedy poor quality substrate installations. RSA cement based renders are not a substitute for good solid plastering trade practices. It is the plasterer's responsibility to assess each project to determine 'best practice'. If in doubt, phone **07 3287 6444**.

PRECAUTIONS

- RSA products should only be applied when weather conditions allow.
- Protect freshly applied products from high winds, freezing and temperatures below 5°C for 48 hours after application. The products should also be protected from rain for up to 48hrs after application.
- RSA products should only be applied within a temperature range of 5-35°C.