

Sure Render FR

Surface Render Compound



Product

Sure Render FR is a polymer modified single component cementitious fairing mortar.

Description

Sure Render FR is a polymer modified fairing mortar for applications in thin layers to produce a natural concrete grey appearance to concrete surfaces or masonry surfaces. It can be applied from feather edge up to a maximum thickness of 10mm. Sure Render FR is based on hydraulic binders, sized and graded quartz sand and synthetic polymers.

Recommended uses

- Thin layer patching for vertical, horizontal and overhead applications.
- Rendering over porous or damaged concrete structures such as walls, water tanks, sewerage and water treatment plants.
- Levelling of uneven surfaces prior to coating.
- Repairs where good compressive strength and abrasion resistance is required.
- Repairing honeycomb concrete, cracks and pinholes.
- Tilt slab and precast concrete.
- Application of render over brickwork.
- Application of this render mortar over existing concrete or masonry surfaces.
- Applications requiring thin build of feather edge to 10mm.

Features & Benefits

- Single component system pre blended powder, simply add water and mix.
- Excellent bond strength and adhesion and bond to concrete or masonry surfaces.
- Feather edging is possible.
- Easy to use and apply.
- No primer or curing compound is required.
- For internal or external use.
- Durable, low water permeation.
- Adequate strength.
- Can be used in vertical, horizontal and overhead applications.

Performance Properties

Typical Compressive Strength

Tested in accordance with AS1012.9 at 20 C

Age	Compressive Strength
28 days	> 25 Mpa

Typical Flexural Strength

Tested in accordance with AS1012.9 at 20 C

Age	Flexural Strength
28 days	> 4 Mpa

Typical Bond Strength

Tested in accordance with AS1012.9 at 20 C

Age	Bond Strength
28 days	> 3 Mpa

Typical Setting Times

Vicat times at 20°C

Initial Set	20°C	45 minutes
	30°C	30 minutes
Final Set	20°C	60 minutes
	30°C	45 minutes

Typical Working Time

Temperature	Time (Minutes)
10°C	90 minutes
20°C	45 minutes
30°C	30 minutes

Application Thickness

Minimum	Feather Edge
Maximum	10 mm

Fresh Wet Density

1900 kg/m³ approx.
(Tested in accordance to AS1012.5)

Application Temperature

Minimum	5°C
Maximum	35°C

Application Instructions

Water Requirement

3.2 - 3.6 litres per 20kg bag.

Packaging

Sure Render FR is supplied in a 20kg polylined

Substrate & Surface Preparation

Surfaces to which Sure Render FR are applied, should be clean, sound and free of dust and loose particles. Cement laitance, oil, grease, mould release oil or curing compounds must be removed from concrete or masonry surfaces by using wire brush, bush hammer, scabber, gritblasting or other means. Ensure that steel rebars are also clean from grease, oil or rust. When repairing spalled or deteriorated concrete, ensure that the concrete has been cut back to sound material. Steel surfaces should be degreased with a suitable solvent or treated by gritblasting. In many cases where corrosion is present, wire brushing to a clean bright surface is sufficient. All absorbent surfaces to be treated with Sure Render FR must be thoroughly dampened to saturate all pores. During application, the temperature of the substrate should not be below 5°C. To avoid high surface temperatures, it is advised to shade area during the period of application.

Priming

At elevated temperatures it is desirable to pre soak areas in which Sure Render FR is to be applied with water prior to application. For very porous substrates it is essential to achieve maximum adhesion, that after pre soaking the substrate Sure Level Surecure be applied to the substrate and allowed to reach a tacky consistency prior to application of Sure Render FR.

Mixing

Care should be taken to ensure that Sure Render FR is thoroughly mixed. Small quantities (up to 10kg) can be mixed by hand using a suitable mixing drum or bucket. Greater quantities of Sure Render FR must be mixed with a mechanical forced action mixer with a high shear stirrer. If mixing small quantities by hand Sure Render should be volume batched. Add approximately 5 volumes of the Sure Render FR powder (loose-filled to excess and struck off level with the top of the measuring container) to one volume of drinking quality water. This should be mixed until fully homogeneous and uniform. When mixing complete bags add between 3.2 to 3.6 litres of drinking quality water into the mixing vessel and, with the mixer in operation, add one full 20kg bag of Sure Render and mix for 3 to 5 minutes until fully homogeneous, uniform, lump free.

Dependant on the ambient temperature and the desired consistency, the amount of water required may vary slightly but should not exceed 3.6 litres per 20kg bag of Sure Render FR. Excess mixing water may result in surface crazing, cracking as well as lower strength and adhesion.

Note: In all cases Sure Render FR powder must be added to water.

DO NOT MIX LARGE QUANTITIES BY HAND

Placing

Apply the mixed Sure Render FR to the prepared substrate by steel trowel from a feather-edge up to 10mm thickness. It should be applied with the minimum or working and be allowed to partly set before finally trowelling to finish. If a very smooth finish is required, a steel trowel should be used.

Do not proceed with the application when rainfall is imminent unless in a sheltered or protected situation.

DO NOT ADD EXCESS WATER

Note: Maximum applied thickness of Sure Render FR is 10mm.

Pot Life

Setting begins after 30-40 minutes (at 25°C substrate and ambient temperature) and ends after another 50-60 minutes. The working period depends very much on the product temperature and on the amount of mixing water added. Therefore, the times given above should be regarded as a guideline. The lower the temperature, the longer the setting time. The less water added, the shorter the setting time. The addition of water to the mortar after it has started to stiffen is not recommended and the product should be discarded.





Finishing

Sure Render FR is finished by striking off with a straight edge and closing with a steel float. Wooden or plastic floats, or damp sponges, may be used to achieve the desired surface texture. The completed surface should not be overworked.

Low Temperature Working

In cold conditions down to 5°C, the use of warm water (up to 30°C) is advised to accelerate strength development. Normal precautions for winter working with cementitious materials should then be adopted. The material should not be applied when the substrates or air temperature is 5°C and falling.

High Temperature Working

At temperatures above 30°C, the material should not be used as this will cause premature setting and make working with the product more difficult.

Curing

Sure Render FR does not normally require curing. In hot, dry windy conditions all cementitious based mortars have to be protected against too rapid surface drying and evaporation. Sure Render FR must be cured immediately after finishing in accordance with good concrete practice. The use of Sure Level Surecure sprayed, brushed or rolled on the surface of the finished Sure Render FR in a continuous film, is recommended when maximum curing is required. The Surecure should be applied at a coverage of 4-5m² per litre. Surecure should be applied immediately after final trowel. In very extreme temperatures and drying conditions, supplementary curing with polythene sheeting, taped down at the edges, may be required. Large areas should be cured as trowelling progresses (0.5m² at a time) without waiting for completion of the entire area.

Application of Coatings

Sure Render FR, when cured, has good resistance to water. However, if areas are subject to exposure or continuous water immersion or chemical attack from solvents or acids, suitable coatings should be applied. Sure Render FR should be sealed and protected with suitable membranes prior the application of decorative coatings to avoid any discolouration from the available free lime or other potentially reactive materials that may be present in the silica sands or cements.

Precautions

- Sure Render FR should not be used when temperature is below 5°C. Sure Render FR should not be used in temperatures greater than 35°C and where rapid moisture can be lost.
- Sure Render FR should not be applied greater than 10mm thickness in any given application.
- For concrete substrates subject to rising damp or moisture, a water proof membrane is required. It is recommended that Sure Moisture Barrier be used as a primer (consult Technical Data Sheet or Sure Level office).
- New concrete surfaces must be at least 14 days old prior to application of Sure Render FR.
- To avoid too rapid drying, protect applied Sure Render FR from direct sunlight or drying winds during actual application, and while curing for up to 24 hours.
- If the substrate on to which Sure Render FR is applied moves or cracks, reflective cracking will occur in the Sure Render FR.

Yields

The approximate yields are obtained if mixed in accordance with recommended procedures and accurately measured water content. A 20kg bag of Sure Render FR with 3.8 litres of water will yield approximately 13 litres. 77 bags required per cubic metre. The recommended application thickness of Sure Render FR is feather edge to 10mm.

Clean Up

Sure Render FR should be removed from tools and equipment with clean water immediately after use.

Storage

Sure Render FR has a shelf life of approximately 8 months if kept in a dry environment completely away from moisture.

Health & Safety

This product is classified as hazardous according to criteria of Work Safe Australia. Material containing Portland Cement and sand now fall into this category. Continuous or extended contact with this product may cause irritation as well as respiratory issues such as bronchitis or silicosis.

- During use avoid inhalation of dust, contact with skin and eyes.
- Suitable protective clothing, dust masks, gloves and eye protection should be worn.
- Continual or extended contact with cement products can cause skin irritation.
- If skin irritation occurs, remove contaminated clothing and flush skin thoroughly with water for a minimum of 15 minutes. Contact Poisons Information Centre or consult medical adviser.
- Material Safety Data Sheets (MSDS) are available on request from the Sure Level office. Read the MSDS and product data sheet carefully before using any product.

Disclaimer

Please Note: Recommendation and advice regarding the use of this product is to be taken as a guide only and Sure Level Pty. Ltd. shall not be liable for any inaccuracy in the information or for any loss, injury or damage whatsoever resulting from its use. To the full extent permitted by law, Sure Level Pty. Ltd. liability is limited at it's discretion, to the replacement of the goods or the supply of equivalent goods.

Fire

Sure Render FR is non flammable.

Part Number

SLC4006

Document Issue Date

January 2004

Contact

Sure Level Pty Ltd
12 Northgate Drive
Thomastown Vic 3074
Australia

Phone: + 61 3 9464 5753
Fax: + 61 3 9464 3630

Web: www.surelevel.com.au
Email: info@surelevel.com.au