Fosroc®
Renderoc® FC

constructive solutions

Polymer modified fairing mortar, to cover surface imperfections, (0mm to 3mm thickness)

Uses

Renderoc FC cementitious fairing coat is designed for application in thin layers up to 3mm to produce a fair-faced appearance to concrete surfaces or masonry surfaces in readiness to receive a protective/decorative coating or left exposed.

It can also be used in association with other Renderoc mortars. Under correct conditions, the product does not require an independent primer or curing membrane.

Advantages

- Excellent bond to the concrete substrate
- Easy to use - no independent primer or curing membrane necessary
- Can be left exposed or over-coated with suitable coatings
- Pre-blended to overcome site-batched variations - only the site addition of clean water is required
- Contains no chloride admixtures
- RCS (Respirable Crystalline Silica) Hazard Free.

Description

Renderoc FC cementitious fairing coat is supplied as a ready to use blend of dry powders which requires only the site addition of clean water to produce a highly consistent cementitious fairing mortar.

The material is based on a blend of cements, graded aggregates, special fillers and chemical additives to provide a material with good handling characteristics, while minimising water demand.

The product exhibits excellent thermal compatibility with concrete and is fully compatible with other Renderoc mortars and Dekguard coatings.

Not hazardous in accordance with Australian Inventory of Industrial Chemicals. Contains <0.1% RCS

Design Criteria

Renderoc FC cementitious fairing coat is designed for vertical and overhead use to infill blow holes, honeycombing and voids up to 3mm deep in the surface of concrete.

Surface imperfections up to 3mm in depth can be filled with the scrape coat application.

Voids / blow holes 3mm to 30mm deep and no more than 25mm in diameter should be separately filled as a prior operation. The Renderoc FC should be mixed at the bottom end of the allowable standard water content as a starting point.

Properties

The following results were obtained at a water:powder ratio of 0.3 by weight or 1:3 by volume at a temperature of 20°C.

Test method	Typical result
Coefficient of thermal expansion:	7 x 10^{-6}
Working life:	Approximately 20 minutes**
Setting time:	30 minutes - 1 hour** (BS 4550)
Fresh wet density:	Approximately 2000 kg/m³
VOC content:	5g / litre

** Note: working life and setting time will vary dependent on ambient and substrate temperatures and prevailing conditions.

Applications Instructions

Preparation

Clean the surface and remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposits or algae. Roughen the surface to remove any laitance and expose the fine aggregate by light scabbling or grit-blasting.

Renderoc repair mortars require no additional preparation prior to the application of Renderoc FC.

No independent priming system is required.

The cleaned areas should be blown clean with oil-free compressed air before continuing.

All prepared areas should be thoroughly soaked with clean water immediately prior to the application of Renderoc FC. Any residual surface water should be removed prior to commencement. Care should be taken and the work scheduled to ensure the water does not run onto areas of recently applied Renderoc FC less than 12 hours old. Under severe drying conditions repeated soaking may be necessary to ensure the substrate is still saturated at the time of application.

Mixing

Care should be taken to ensure that Renderoc FC is thoroughly mixed. A forced-action mixer is essential. Mixing at a slow speed (400/500 rpm) in a suitably sized drum using appropriate equipment such as a 120/140mm helical mixing paddle fitted to a heavy-duty 1600W mixer. Free fall cement mixers are not suitable.

Place 5.45 - 6.35 litres of drinking quality water into the mixer and, with the machine in operation, add one full 20kg bag of Renderoc FC and mix for 3 - 5 minutes until fully homogeneous. Dependent on the ambient temperature and the desired consistency, the amount of water required may vary slightly but should not exceed 6.35 litres per 20kg bag of Renderoc FC.

If mixing small quantities by hand, Renderoc FC should be volume-batched. Add 3 volumes of the Renderoc FC powder (loose-filled to excess and struck off level with the top of the measuring container) to 1 volume of drinking quality water. This should be mixed vigorously until fully homogeneous.

Note: In all cases Renderoc FC powder must be added to water.

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Application

Voids / blow holes 3mm to 30mm deep and no more than 25mm in diameter should be separately filled as a prior operation using Renderoc FC and allowed to initially set.

Then apply the mixed Renderoc FC to the prepared substrate by steel trowel from a feather-edge up to 3mm thickness. It should be applied with the minimum of working and be allowed to partly set before finally trowelling to a smooth finish. If a very smooth finish is required, a small amount of water may be flicked on to the surface of the Renderoc FC with a paint brush prior to final trowelling.

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

Note: other than when filling blow holes as described above, the maximum applied thickness of Renderoc FC is 3mm.Low temperature working

Normal precautions for winter working with cementitious materials should then be adopted. The material should not be applied when the substrate and/or air temperature is 5°C and falling. At 5°C static temperature or at 5°C and rising, the application may proceed.

High temperature working

At ambient temperatures above 35°C, the material should be stored in the shade and cool water used for mixing.

Curing

Renderoc FC does not require any form of curing in moderate ambient conditions, but under strong drying conditions curing may be necessary. In this case Renderoc FC should be cured immediately after finishing in accordance with good concrete practice.

The use of Nitobond AR, sprayed on to the surface of the finished Renderoc FC in a continuous film is recommended. Large areas should be cured as trowelling progresses (0.5 m² at a time) without waiting for completion of the entire area. In very fast drying conditions, supplementary curing with polythene sheeting taped down at the edges should be used.

In cold conditions, the finished application must be protected from freezing.

coatings. These coating products provide a decorative and uniform appearance as well as protecting parts of the structure which have not been repaired and might otherwise be at risk from the environment. Dekguard products may be applied over the repair area following the removal of **any** curing membranes prior to the application of Dekguard system to allow penetration of the silane primers.

Cleaning

Renderoc FC should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Limitations

Renderoc FC is not suitable for use on concrete subject to vehicle or foot traffic.

Renderoc FC should not be used when the temperature is below 5°C and falling. Do not proceed with the application when rainfall is imminent unless in a sheltered or protected situation. Exposure to rainfall prior to the final set may result in water uptake and severe reduction in the performance of the hardened product. The product should not be exposed to moving water during or after application.

If any doubts arise concerning temperature or substrate conditions, contact Fosroc.

Supply

Renderoc FC 20kg bag:	FC302001-20KG

Coverage and yield

Approximately 12.0 litres / 20kg bag (4.0 m² at 3mm thickness)

Storage

Renderoc FC has a shelf life of 18 months if kept in the original, unopened bags. Do not use if there are lumps in the product, or a loss of workability (requiring more water to be added) is experienced.

If stored at high temperatures and/or high humidity conditions the shelf life may be reduced.

FOSROC

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