

Renderoc RP252



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Renderoc RP252
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Two component fibre and polymer modified cementitious mortar for re-profiling and protection

Uses

Renderoc RP252 is designed for application from 3 mm up to 20 mm (see 'Design criteria') to produce a fair-faced finish to concrete or masonry surfaces. It can be used either to produce a surface in readiness for a protective coating or as a protective mortar layer.

Renderoc RP252 can be used independently to infill surface imperfections and voids or to render large sections of concrete.

Advantages

- Easy to use
- Wide range of application thicknesses
- Low permeability provides protection against carbon dioxide and water-borne chlorides
- Excellent bond to the concrete substrate
- Pre-blended to overcome site-batched variation
- Shrinkage compensated
- Can be applied by the wet spray process for fast application over large areas

Standards Compliance

Renderoc RP252 has been approved by the British Board of Agrément, Certificate No 98/3461.

Description

Renderoc RP252 is supplied as a ready to use blend of dry powders and polymer emulsion which when mixed produce a highly consistent cementitious re-profiling and protection mortar. The product exhibits excellent thermal compatibility with concrete and is compatible with other Renderoc mortars and Dekguard coatings.



Design criteria

Renderoc RP252 is designed for vertical or horizontal use. It can be applied as a render from 3 mm to a practical maximum depth that will vary with orientation, typically 15 to 20 mm on verticals and 10 mm on soffits. On horizontal surfaces greater thicknesses e.g. 25 mm can be applied, however other grades of Renderoc may be more appropriate. It can also be used for the filling of blow-holes and honeycombing.

Prior to the application of Renderoc RP252 any necessary repairs to the concrete should be undertaken using the Fosroc Systematic Approach. Consult the local Fosroc office for further information.

Properties

The following results were obtained at a temperature of 20°C.

Test method	Typical result
Compressive strength (BS 6319 Pt 2: 1983 — dry cure):	7 N/mm ² @ 1 day 20 N/mm ² @ 7 days 30 N/mm ² @ 28 days
Flexural strength (BS 6319 Pt 3: 1990):	10 N/mm ² @ 28 days
Tensile strength (BS 6319 Pt 7: 1985):	6 N/mm ² @ 28 days
Setting time (BS 4551 Pt 14: 1980) —	
Initial set:	5 hours
Final set:	8 hours
Fresh wet density:	Nominally 1950 kg/m ³
Shrinkage (25 x 25 x 285 prisms, 20°C, 65% RH):	< 300 microstrain @ 7 days
Chemical resistance:	The low permeability of Renderoc RP252 severely retards chemical attack in aggressive environments. The cured mortar is impermeable to acid gases, water-borne chloride ions and oxygen



Specification clauses

Re-profiling mortar

The re-profiling mortar shall be Renderoc RP252 a two component, monofilament fibre reinforced modified cement-based blend of powders and liquid polymer.

Protection mortar

The protection mortar shall be Renderoc RP252, a two component monofilament fibre reinforced modified cement-based blend of powders and liquid polymer.

The cured mortar shall achieve a compressive strength of 30 N/mm² and a shrinkage of less than 300 microstrain at 7 days.

Application instructions

Preparation

All surfaces should be free from contamination. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or abrasive-blasting.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination should then be assessed by a pull-off test.

Substrate conditioning

The cleaned areas should be blown clean with oil-free compressed air before continuing. All prepared areas should be saturated surface dry immediately before the application of one coat of Renderoc RP252 Surface Conditioner, i.e. they should be thoroughly saturated with clean water and any residual surface water removed. Under severe drying conditions and on highly absorbent substrates, repeated soaking will be necessary. The surface conditioner should be scrubbed well into the surface and Renderoc RP252 should be applied before the conditioner dries (film forms).

Care should be taken and the work scheduled to ensure the water does not run onto areas of recently applied Renderoc RP252 less than 12 hours old.

In circumstances where a barrier is required between substrate and mortar, or where the substrate is likely to remain permanently damp, Nitobond EP bonding aid should be used. Contact the local Fosroc office for further information.

Recently executed Renderoc mortar repairs require no additional preparation prior to the application of Renderoc RP252.

Mixing

Care should be taken to ensure that Renderoc RP252 is thoroughly mixed using a forced action mixer. Mixing in a suitably sized drum using an approved Renderoc Spiral Paddle in a slow speed (400/500 rpm) heavy-duty drill is acceptable for the occasional one-bag mix.

Place all the Renderoc RP252 liquid polymer into the mixer and with the machine in operation, add one full bag of Renderoc RP252 powder and mix for a minimum of 3 minutes to a maximum of 5 minutes until homogeneous. Do not subsequently re-tamper with extra water.

Note: In all cases Renderoc RP252 powder must be added to Renderoc RP252 liquid. Part-bag mixing is not permitted.

Mixing warning

As with other repair mortars, Renderoc RP252 may exhibit satisfactory handling characteristics even though inadequately mixed. This will result in a significantly lower level of performance or possible failure. It is therefore essential that mixing instructions are strictly adhered to with particular emphasis on the time of the mixing operation.

Application

Apply the Renderoc RP252 to the prepared substrate by steel, wood or plastic float from 3 mm minimum to the maximum practical thickness. The initial application should be worked firmly into the prepared surface as a scrape coat to provide a key to subsequent material. Further build of material should be applied in wet on wet layers. It should be finished with a minimum of working.

If sagging occurs during application, the Renderoc RP252 should be completely removed and reapplied at a reduced thickness.

Build-up

Additional build-up can be achieved by application of multiple layers. The final thickness is dependent on the material consistency and substrate profile. The surface of the intermediate layers should be comb scratch-keyed and cured with Nitobond AR. A further application of Renderoc RP252 may proceed, without the necessity of RP252 Surface Conditioner as soon as this layer has set.

Spray application

Renderoc RP252 can be applied by the wet spray technique. Spray application generally provides a more dense compound with greatly enhanced mortar to substrate bond characteristics. For further details on the wet spray technique, including selection of spraying machines and nozzles, consult the local Fosroc office.



Finishing

Renderoc RP252 can be finished using several different techniques. Screed rails and guide wires can be used to advantage on large areas. Steel, wood and plastic floats can all be used to achieve the desired surface texture. The use of a damp sponge to remove trowelling marks is recommended. The completed surface should not be over worked.

Low temperature working

In cold conditions down to 5°C normal precautions for winter working with cementitious materials should 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.

Curing

Renderoc RP252 is a cement-based repair mortar. In common with all cementitious materials, Renderoc RP252 must be cured immediately after finishing in accordance with good concrete practice. The use of Nitobond AR sprayed onto the surface of the finished Renderoc in a continuous film is recommended.

A low pressure atomising sprayer is essential for applying the Nitobond AR. Any excessive run-off on verticals or drips on soffits should be removed by brush before they harden.

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 repair must be protected from freezing.

Overcoating with protective decorative finishes

Renderoc RP252 may be overcoated with Fosroc's Dekguard range of protective/decorative coatings. The Renderoc RP252 should be primed/cured as trowelling progresses with Nitobond AR, applied as above and allowed to cure for 48 hours prior to the application of the topcoat. Dekguard primers should not be used.

When considering overcoating Renderoc RP252 always contact the local Fosroc office for advice.

Cleaning

Renderoc RP252 and Nitobond AR Surface Conditioner should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Limitations

Renderoc RP252 should not be used when the temperature is below 5°C and falling. Due to the nature of Renderoc RP252, the product should not be used in areas subjected to heavy traffic. Neither should it be exposed to moving water during application. Exposure to heavy rainfall before the final set may result in surface scour. If any doubts arise concerning temperature or substrate conditions, consult the local Fosroc office.

Estimating

Supply

Renderoc RP252: 20 kg bags, 3.4 litre bottles

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Surface Conditioner: 5 and 25 litre containers

Nitobond AR: 5 and 25 litre containers

Coverage and yield

Renderoc RP252: 12 litres per pack (approximately 2.4 m² at 5 mm thickness)

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Surface Conditioner: 7 to 9 m²/litre

Nitobond AR: 6 to 8 m²/litre

Notes: The actual yield of Renderoc RP252 will be reduced if the material is applied by a spray technique due to the increase in density. The coverage figures for liquid products are theoretical. Due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Storage

Shelf life

All products have a shelf life of 12 months if kept in a dry store in the original, unopened bags or packs.

Storage conditions

Store in dry conditions in the original unopened bags or bottles. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to 4 to 6 months. Renderoc RP252 liquid and Nitobond AR should be protected from frost.



Precautions

Health and safety

Renderoc RP252 contains cement powders which, when mixed or become damp, release alkalis that can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and dust mask. The use of barrier cream provides additional skin protection. In the case of either powder or liquid coming in contact with eyes, rinse immediately with plenty of clean water and seek medical advice. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. If swallowed, seek medical attention immediately — **do not** induce vomiting.

For further information see Product Safety Data Sheet.

Fire

Renderoc RP252, Nitobond AR and Renderoc RP252 Surface Conditioner are non-flammable.

For further information, refer to the Product Safety Data Sheet.



Fosroc Limited

Coleshill Road
Tamworth
Staffordshire
B78 3TL
Tel 01827 262222
Fax 01827 262444
www.FosrocUK.com

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