

Fosroc® Renderoc Patch

Fast setting cementitious repair mortar designed for general concrete repairs, in particular for the precast industry

Uses

General purpose fast setting repair material for deep repairs, re-profiling damage arris and general concrete re-profiling.

Advantages

- No independent primer required – a slurry coat of Renderoc Patch is sufficient
- Rapid setting with high early age strength
- Single component – mixed with fresh water
- Low slump
- Easily applied by hand or trowel

Description

Renderoc Patch is supplied as a ready to use blend of specially selected dry powders, which requires only the addition of drinking quality water to produce a highly consistent repair mortar.

Renderoc Patch is designed for arris repairs and reprofiling and can be applied overhead from featheredge to 20mm maximum and vertically from featheredge up to 30mm maximum without slump deformation.

Specification Clause

The repair mortar shall be Renderoc Patch, a one component, fast setting cementitious mortar complying with the requirements of BS EN 1504-3, Class R3. The cured mortar shall achieve a compressive strength of 20 MPa at 1 day and 35 MPa at 28 days. It shall be able to be applied in sections up to 30 mm thickness in vertical locations in a single application without formwork. The product shall be mixed, applied and cured in accordance with the manufacturer's written instructions to a correctly prepared substrate.

Standards Compliance

Renderoc Patch complies with the requirements of BS EN 1504-3, Class R3.

Application Instructions

If aggregate is exposed by damage to the substrate, ensure all loose material is removed. Other finishes will require suitable mechanical preparation to remove surface laitance and form a textured surface. Clean the surface by removing any dust, unsound or contaminated material, oil, grease or algae. Steam cleaning, detergent scrubbing or the use of a proprietary degreaser should remove any oil or grease deposits.

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09 DOP:UK9- 155 0370- CPR-0845	
Fosroc® Renderoc Patch	
EN 1504-3: Structural and non-structural repair methods 3, 4 and 7	
Compressive strength	Class R3: ≥ 25 MPa
Chloride ion content	< 0.05%
Adhesive strength by pull-off test	> 1.5 MPa
Thermal compatibility: freeze thaw cycling with immersion	> 1.5 MPa
Elastic modulus	>15 GPa
Reaction to fire	Euroclass A2 s1 d0
Dangerous substances	Complies with 5.4

Application Instructions (continued)

Once cleaned the surface shall be saturated surface dry prior to the application of the primer slurry. To make the primer slurry, combine 1kg of the Renderoc Patch powder with 170g of drinking quality water. This is mixed thoroughly for at least 3 minutes using a trowel. The slurry is then worked into the saturated surface dry substrate by a gloved hand or trowel, ensuring all voids are filled.

Once the substrate has been primed immediately apply the Renderoc Patch 'wet on wet' to the primer. Mix the Renderoc Patch powder with clean water to a water / powder ratio of between 0.14 and 0.15; e.g. for 5kg Renderoc Patch use 0.7 - 0.75 litres of water.

Do not mix more powder than can be applied within a 20 minute period. Mix the material by hand or machine until a stiff / no slump consistency is achieved, ensuring the colour is uniform and all particles are well wetted. Once in position allow the material to stiffen slightly before reprofiling with a trowel to the required dimensions.

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Properties

The following results were obtained at a water to powder ratio of 0.15 and at a temperature of 20°C unless otherwise stated.

Test Method	Standard	EN 1504 R3 Requirement	Test Result
Compressive strength	EN 12190:1999	25 MPa @ 28 days	10 MPa at 4 hours 20 MPa at 24 hours 30 MPa at 7 days 35 MPa at 28 days
Bond strength by pull off:	EN 1542:1999	> 1.5 MPa	2.2 MPa (B)
Chloride ion content:	EN 1015-17:2000	< 0.05%	0.01%
Freeze thaw cycling:	EN 12617-4:2002	> 1.5 MPa	2.1 MPa
Fire rating	EN 1504-3 cl. 5.5		A2 s1 d0
Flexural strength	EN 12190:1999		11.4 MPa @ 28 days
Elastic Modulus	EN 13412	> 15 GPa	20.3 GPa @ 28 days
Working Life			10-15 minutes @20°C
Setting Time	BS 4551 Pt14:1980		20 – 30 minutes
Fresh wet density			Nominally 2140kg/m ³ **

* Note - Working life will depend on the ambient and substrate temperatures .

** Note - Dependent on actual consistency used – See Application Instructions

Clarification of property values: The typical properties given above are derived from laboratory testing. Results derived from field applied samples may vary. Maximum build thickness is dependent on location of repair, water content and application technique.

Low temperature working

In cold conditions below 10°C, the use of warm water (up to 30°C) is advisable to accelerate strength development. 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 3°C and falling. At 3°C static temperature or at 3°C and rising, the application may proceed.

High temperature working

At ambient temperatures above 30°C, the material should be stored in the shade and cool water used for mixing.

Curing

Renderoc Patch is a cement-based repair mortar. In common with all cementitious materials, Renderoc Patch must be cured immediately after finishing in accordance with good concrete practice. The use of Nitobond AR, sprayed on to the surface of the finished mortar in a continuous film, is recommended. In fast drying conditions, supplementary curing with polythene sheeting taped down at the edges must be used. In cold conditions, the finished repair must be protected from freezing.

Precautions

- Only mix enough material to apply within a 20 minute period
- Never add extra water to regain workability once set
- Do not over work the finished surface
- Cool temperatures retard setting times
- Warm temperatures accelerate setting times

Cleaning

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

Estimating

Supply

Renderoc Patch:	25kg
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Yield

Renderoc Patch:	13 litres mixed material per bag.
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Limitations

Renderoc Patch should not be used when the temperature is below 3°C and falling. Exposure to heavy rainfall prior to the final set may result in surface scour. The product should not be exposed to moving water during application or totally immersed in water for the first 24 hours after application. If any doubts arise concerning temperature or substrate conditions, consult the local Fosroc office.

For overhead repairs exceeding 20mm depth use one of the Renderoc HB range of products. For larger floor repairs in excess of 0.25m² use Paveroc or Patchroc GP.

Storage

Renderoc Patch has a shelf life of 12 months from the date of manufacture if kept in dry storage in the original, unopened bags.

If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to less than 6 months.

Nitobond AR should be protected from frost.

Health and safety

For further information refer to appropriate Product Safety Data Sheet.

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Important note

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