

Method Statement

Renderoc SP40

Section A : General Comments

High temperature working

It is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:

- (i) Store unmixed materials in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- (ii) Keep equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment, which will come into direct contact with the material itself.
- (iii) Try to avoid application during the hottest times of the day, arrange temporary shading as necessary.
- (iv) Make sufficient material, plant and labor available to ensure that application is a continuous process.
- (v) Where mixing water is required in the application of a product, it is advised to maintain such water at a maximum of 20°C.

Equipment

It is suggested that the following list of equipment is adopted as a minimum requirement

<i>Protective clothing</i>	:	Protective overalls Good quality gloves, goggles and face mask
<i>Preparation equipment</i>	:	Wire brush Proprietary blasting equipment
<i>Mixing equipment</i>	:	Horizontal pumps – <ul style="list-style-type: none"> ➤ Putzmeister S5 - Electric powered towable unit, 5 to 12.5 bar, 10 to 20 litres per minute ➤ Putzmeister Strobot 406S - Suitable for smaller projects; spray unit only; 240V 15amp; smaller compressor required; up to 15 litres per minute output. Vertical pumps- <ul style="list-style-type: none"> ➤ Putzmeister Sprayboy P12 - Single phase or 3 phase electric, forced action mixer; 12 litres per minute;
<i>Application equipment</i>	:	Wooden float Steel or plastic finishing float Finishing sponge, paint brush.

Application - points of note

Fosroc operates a policy to encourage the use, where possible, of registered applicators, since the long-term performance of the materials is dependent upon proper application.

Section B : Application Method

1.0 Surface preparation

Attention to full and proper preparation of the substrate is essential for complete repair adhesion.

- i. The surface of the substrate should be thoroughly cleaned to remove all traces of dust, oil, paint, curing compounds, grease, corrosion deposits, algae or any unsound material which might affect subsequent bond between Renderoc SP40 and the substrate.
- ii. It is necessary to cut back the perimeter to a depth of carbonation (minimum 10mm) so that the repair patch may be 'toed-in' and finished flush with the surrounding concrete.
- iii. Oil and grease deposits are best removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination should be assessed by a pull-off test.
- iv. The substrate should further be 'roughened' to remove excess laitance, to expose pinholes & blowholes, corrosion deposits and to provide a mechanical key for subsequent application of Renderoc SP40. This is most effectively achieved by the use of proprietary blast media, such that the fine aggregate is exposed but not polished.
- v. Where preparation techniques result in voids of greater than 50 mm depth, it will be necessary to use other Renderoc products to make local repairs before over coating with Renderoc SP40. Such areas, once repaired, will not require additional preparation prior to the application of Renderoc SP40.
- vi. Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Abrasive-blasting is recommended for this process.
- vii. The specifications mentioned in Data sheet shall be strictly adhered to.

2.0 Substrate priming

- 2.1 All prepared areas should be thoroughly soaked with clean, potable water immediately prior to the application of Renderoc SP40, such that the substrate is "saturated surface dry".
- 2.2 In situations where enhanced bond strength is required or where surface is damp (e.g sea walls, quays, etc) bonding aids Nitobond EP should be used.

3.0 Mixing

Care should be taken to ensure that Renderoc SP40 is thoroughly mixed. In all cases the powder should be added to the water and mixed strictly in accordance with appropriate procedure.

MIXER- Renderoc SP40 must be mixed in forced-action type mixers, and not in free-fall mixers. Many of the pumps have forced-action mixers built into the single powered unit, which perform quite satisfactorily. Continuous mixers where the powder and water are metered into a mixing screw at a controlled rate are generally not suitable due to their short mixing time. Please contact the local FOSROC office for guidance on suitability for this mixing process.

Water requirement – 4.24 litres/ bag of Renderoc SP40

HOSES- The hoses for conveying the mortar should be pressure rated to at least twice the pressure capability of the pump. Typically the hose should be 25 mm internal diameter, with a minimum internal diameter of 19 mm. Mortars have successfully been pumped through 20 metres of hose. Care must be taken to ensure all the hose fittings are properly attached to the hose and are in good condition.

NOZZLES - Various designs of nozzle have been used successfully for spraying Renderoc mortars. The compressed air for dispersing and projecting the mortar on to the substrate is introduced either through a central pipe or down an annulus. The quality of the application is affected by the diameter of the exit aperture (this controls the size of the cone of sprayed mortar, the rate of flow and the degree of atomisation). Apertures of 10 mm, 12 mm and 14 mm in steel and rubber caps have proved effective.

4.0 Application

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

- 4.1 Exposed steel reinforcements must be firmly secured to avoid movement during application since it might affect mortar compaction, build & bond strength.
- 4.2 Minimum application thickness is 10mm, upto 150mm for overhead and 200 mm vertical application built in layers.
- 4.3 The nozzle must be held at 20-50 cm from the substrate for maximum efficiency during wet spray application and to prevent rebound loss or bond failures. Under good conditions, the mortar can be applied at a rate up to 20 litres per minute.

5.0 Finishing

- 5.1 Renderoc SP40 is finished by striking off with a straight edge and closing with a steel or plastic float. Note that water can be drawn to the surface if 'overworking with the float occurs, and an unsightly finish may result.
- 5.2 Damp sponges or plastic floats may be used to achieve a desired surface texture, but care should again be taken not to overwork the surface.

6.0 Curing

6.1 Curing of Renderoc SP40 is required as per normal construction practices. However, Fosroc recommends Concure WB for effective curing.

7.0 Cleaning

7.1 All equipment should be washed with clean water immediately after use. Equipments used with Nitozinc primer and Nitobond EP should be cleaned with Nitoflor Solvent. Cured material can only be removed by mechanical means.

Section C : Approval and variations

This method statement is offered by Fosroc as a 'standard proposal' for the application of Renderoc SP40. It remains the responsibility of the Customer to determine the correct method for any given application. Where alternative methods are to be used, these must be submitted to Fosroc for comment, in writing, prior to the commencement of any work.