

Technical Data Sheet

White Sand REP FR 200

**High-strength, Fibre-reinforced, Structural
Cementitious Repair Compound**

Product Description

WHITE SAND REP FR 200 is a ready-to-use, polymer-modified, fiber-reinforced, micro silica-enhanced, cementitious pre-mixed powder consisting of a blend of Portland cement, graded aggregate, and special chemical additive.

Mixing WHITE SAND REP FR 200 with a controlled amount of clean water produces a highly consistent repair mortar which is suitable for most structural concrete repairs.

WHITE SAND REP FR 200 Once mixed, the product becomes a thixotropic mortar that is hand-applied to repair demanding structural repair while being compatible with host concrete. The material displays excellent mechanical properties, easy workability and application in horizontal, vertical, or overhead applications, and excellent adhesion characteristics.

Uses and Key Functions

- Repair of broken structural concrete elements.
- Vertical concrete repair up to 75 mm in a single layer.
- Overhead concrete repair up to 40 mm in a single layer.
- Horizontal and patch repairs up to 100 mm in a single layer.
- Honeycomb repairs, general concrete repairs.
- Thixotropic properties allow high build-up in vertical and overhead repairs.
- Non-shrink properties ensuring repair dimensional stability.
- High physical and mechanical properties.
- Extremely low permeability providing reinforcement protection against corrosion as well as resistance to ingress of contaminants.

Standard compliance

WHITE SAND REP FR 200 complies with BS EN 1504-3, class R3.

Product Performance Properties

Type	Single-component, thixotropic repair mortar
Color	Grey
Wet Density	2.0 kg/l approx.
Bond Strength (ASTM C1583)	≥ 1.8 MPa @ 28 days
Compressive Strength (ASTM C109)	≥ 30.0 MPa @ 7 days ≥ 55.0 MPa @ 28 days
Flexural Strength (ASTM C348)	≥ 6.0 MPa @ 28 days
VOC Content (ASTM D2369)	< 10 gm/liter (LEED Compliant)

Directions for Use

Substrate Preparation

The substrate should be sound, clean, and free from any contaminants.

Absorbent surfaces should be saturated thoroughly. Metal substrates (iron and steel) should be free from scale, rust, oil, and grease.

Any shuttering should be watertight and of good strength to prevent deformation.

Cut back all damaged and weak concrete to reach sound concrete and/or to a minimum depth of at least 10 mm.

Grit blast corroded steel reinforcement to remove all rust traces.

In case of significant loss in the steel reinforcement cross-section, replace the steel.

Remove all concrete forms around the exposed steel reinforcements by a thickness of 25 mm.

Saw cut the perimeters of the repair area to a minimum depth of 10mm.

Clean the prepared area thoroughly by using a brush and/or compressed air.

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Priming

To accept WHITE SAND REP FR 200, prime all grit-blasted steel reinforcements within 2 to 4 hours by applying one or two coats of corrosion inhibitor for steel reinforcement.

Soak the areas to be repaired with WHITE SAND REP FR 200 with clean water before applying the repair mortar.

Remove all excess water before the application of one coat of acrylic primer and bonding agent WHITE SAND PRIME RC.

Allow WHITE SAND PRIME RC to become tacky before applying the repair mortar WHITE SAND REP FR 200.

Mixing

Consistency is dependent largely on the amount of mixing water used.

The standard value is about 4.0 liters per 25 kg bag of WHITE SAND REP FR 200.

The powder of WHITE SAND REP FR 200 must be added slowly to the water during the mixing process which should be carried out using a grout mixer or a slow-speed drill fitted with high shear mixing paddle. Mixing should remain for at least 3 minutes until the material becomes homogeneous and even in consistency. Do not attempt part-mixes.

At high temperatures, condition the powder bags in a cool environment before use and use chilled water for mixing to keep the temperature below 30°C.

Placement and Finishing

Apply WHITE SAND REP FR 200 by a trowel or by hand. Apply the ready-to-use mortar by pressing it firmly to fully compact the mortar and ensure good adhesion with the steel reinforcements and the substrate. Initially, finish and level the material surface by a wooden or plastic float.

Carry out the final finishing using steel float. For high-thickness applications, vertically and overhead, it is better to gradually apply it by hand in patches with a firm pressing; this ensures the adhesion with the substrate and the subsequent layers for the WHITE SAND REP FR 200.

Curing

WHITE SAND REP FR 200 is a cementitious-based material; it is similar to a concrete cure by continuously watering and covering it with polyethylene sheets. Or, to lower the rate of water evaporation, treat exposed surfaces with a WHITE SAND-Cure curing compound system.

Cleaning

WHITE SAND REP FR 200 should be removed from tools and equipment immediately after use and before the initial cure with clean water.

Hardened material can only be removed mechanically.

Storage and shelf life

WHITE SAND REP FR 200 has a shelf life of 12 months when stored in a dry place and good warehouse conditions in unopened and undamaged original packaging.

Packaging

WHITE SAND REP S 100 is supplied in 25 kg / 50kg paper bags.

Shelf Life and Storage

The original sealed packaging of WHITE SAND REP FR 200 has a shelf life of 12 months when stored in a dry, shaded place and in good warehouse conditions, below 35 C.

Health and Safety

It is highly recommended to use suitable protective gloves and goggles during handling and application. Avoid unnecessary direct contact of skin or eyes to the material.

Accidental contact of WHITE SAND REP FR 200 to the skin should be washed off immediately with soap and clean water.

Eye Irritation or contact should be washed off immediately with copious amount of clean cold water.

For prolonged irritation, seek medical advice.

WHITE SAND REP FR 200 is a non-flammable and not classified as a hazardous material under current legislations. Do not dispose of the material in water or soil.

For sound and valid disposal, consult and follow the related local regulations.

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White Sand Product Quality

Ensuring the achievement of customers' requirements and conformance to national and international standards, all WHITE SAND products are developed and manufactured under the base of a highly quality-oriented Product Development processes, and an independently standardized Quality Management System.

Technical Support

WHITE SAND provides assistance to its customers and gives site support, consultations and technical advice on concrete repair, surface preparation and treatment, tile adhesive and tile grout selection, and tile installation techniques.

Additional White Sand Products

WHITE SAND produces a wide range of high-quality construction chemicals and specialty products including following product groups:

Adhesives and Tilling Systems

- Waterproofing and Protective Coating Systems
- Concrete Repair & Restoration Systems
- Finishing & Paints Systems
- Admixtures for Mortar and Concrete
- Surface Treatments and Primers
- Industrial Flooring Systems
- Engineering Grouts and Anchoring Systems
- Resinous Protective Coating and Lining Systems
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Disclaimer

The information given here is based on the best of our knowledge, good faith, experience and laboratory based results and therefore the results will vary depending on the real time application. Also, the values indicated in this Data Sheet here are subject to $\pm 10\%$ variance due to multiple factors. The performance of our Product depends on the workmanship/quality of application job at the site. Hence White Sand Company for Industry is not responsible for any sort of claims/disputes arising out of any negative results by using our ranges of products. White Sand Company for Industry is not held responsible for use of this product for applications other than specified and/or adopting any faulty application/curing methodologies. It is the user's responsibility to have through this Technical Data Sheet prior to applying our products and to ensure with White Sand Company for Industry that any product information is still prevailing at the time of application. Also the user must be sure that the product is suitable for the use intended and also applied it as specified while taking care of all precautionary measures. While all the products comply with the properties shown on current technical data sheets/brochures, White Sand Company for Industry does not warrant or guarantee the products' performance as it doesn't have any control over factors adopted during its actual application.



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