

## WHITE SAND REP FR 400

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

### Description

WHITE SAND REP FR 400 is a ready to use, polymer-modified, fiber-reinforced, microsilica-enhanced, cementitious pre-mixed powder consists of a blend of Portland cement, graded aggregate and special chemical additive. Mixing WHITE SAND REP FR 400 with controlled amount of clean water produces a highly consistent repair mortar which is suitable for most structural concrete repairs.

WHITE SAND REP FR 400 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 combined with easy workability and application in horizontal, vertical or overhead applications, in addition to 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 allowing 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.

### Product Performance Properties

Type	Single-component pre-mixed cementitious powder
Color	Grey
Mixing Water	About 3.8 liters water/20 kg bag
Wet Density	2.0 kg/l approx.
Tensile Strength (ASTM C307)	≥ 1.5 MPa @ 28 days
Compressive Strength (ASTM C109)	≥ 30.0 MPa @ 7 days ≥ 75.0 MPa @ 28 days
Flexural Strength (ASTM C348)	≥ 4.0 MPa @ 7 days ≥ 6.0 MPa @ 28 days

## 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.

### Priming

To accept WHITE SAND REP FR 400, 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 400 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 400.

### Mixing

Consistency is dependent largely on the amount of mixing water used. Standard value is about 4.0 liters per 20 kg bag of WHITE SAND REP FR 400.

The powder of WHITE SAND REP FR 400 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 prior to use and use chilled water for mixing to keep temperature below 30°C.

### Placement and Finishing

Apply WHITE SAND REP FR 400 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 thicknesses 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 400.

### Curing

WHITE SAND REP FR 400 is a cementitious-based material; it is similar to a concrete cure by continuous watering and covering with polyethylene sheets. Or, to lower rate of water evaporation, treat exposed surfaces with WHITE SAND-Cure curing compound system.

### Cleaning

WHITE SAND REP FR 400 should be removed from tools and equipment immediately after use and before initial cure with clean water. Hardened material can only be removed mechanically.

### Storage and shelf life

WHITE SAND REP FR 400 has a shelf life of 12 months when stored in a dry place and good warehouse conditions in unopened and undamaged original packaging.



# WHITE SAND

Construction Chemicals

Construct your dream !

## Health and Safety

WHITE SAND REP FR 400 is supplied in 20 kg bags.

## Shelf Life and Storage

The original sealed packaging of WHITE SAND REP FR 400 has a shelf life of 12 months when stored in a dry, shaded place and 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 400 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 400 is a non-flammable and not classified as a hazardous material under current legislations.

Do not dispose the material into water or soil. For the sound and valid disposal, consult and follow the related local regulations.

### 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 and technical support to its customers, consultations and technical guidance for many different applications in construction chemicals. Waterproofing systems and protective coatings. Tile adhesives and tile grouts selection. Concrete repair and restoration systems.

### Additional White Sand Products

WHITE SAND manufactures a wide range of high-quality construction chemicals and specialty products Including the following product groups:

- Surface Treatments and Primers.
- Cement Modifiers for Mortars.
- Adhesives and Tiling Systems.
- Concrete Repair Compounds.
- Waterproofing Materials.
- Protective Coatings and Linings.
- Industrial Flooring Systems.
- Plasters and Finishing Materials.

#### 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.

