

Technical Data Sheet

White Sand FLOW GR 400

Non-shrink cementitious grout

Product Description

WHITE SAND FLOW GR 400 is a multi-purpose non-shrink, non-metallic, cement-based grout consisting of a blend of Portland cement, graded aggregates, and special chemical additives. Mixing WHITE SAND FLOW GR 400 with controlled water produces a free-flowing grout that can fill gap thicknesses from 10 to 75 mm. In the plastic stage, WHITE SAND FLOW GR 400 develops a positive volumetric expansion utilizing the gaseous system.

Standard compliance

- WHITE SAND FLOW GR 400 complies with ASTM C1107 (Previously CRD621), Grade A.
- WHITE SAND FLOW GR 500 complies with EN 1504-3 standard ("Structural and nonstructural repair") for R4-class structural mortar.

Product Performance Properties

Type	One-component, pre-mixed cementitious powder
Color	Grey
Wet Density	2.3 kg/l approx
Workability (ASTM C 1437)	0 minutes $\geq$ 300 % 30 minutes $\geq$ 280 %
Compressive Strength (ASTM C 109)	$\geq$ 30.0 MPa @ 7 days $\geq$ 45.0 MPa @ 28 days
Flexural Strength (ASTM C 348)	10 minutes (start)
Time for expansion (ASTM C 878)	24 hours (end) $\geq$ 8.0 MPa @ 28 days
Bleeding Water (ASTM C 232)	Nil
Chloride Content	Nil
VOC Content (ASTM D2369)	10.0 gm/liter (LEED Compliant)

Uses and Key Functions

- Assembly grouting of machine beds, crane rails, etc.
- Filling the volume between the foundation's socket and pre-cast concrete columns.
- Filling gaps between pre-cast concrete elements.
- Filling gaps between concrete foundation and steel bedplates.
- Anchoring of anchors, bolts and masts.

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Directions for Use

Surface 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.

Mixing

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

The standard value is about 4.0 liters per 20 kg bag of WHITE SAND FLOW GR 400.

The powder of WHITE SAND FLOW GR 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 a 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.

Notes:

- At low temperatures (below 8 C), warm water is recommended to achieve the early strength. And the formwork is recommended to be kept longer time.
- At high temperatures (35 C and above), cold water (less than 20 C) must be used for mixing.

Placement

Pour the mixed WHITE SAND FLOW GR 400 into the prepared area such that the grout has the shortest distance to travel.

Ensure that air displaced by the material is allowed to escape.

When carrying out base plate grouting, ensure that sufficient head of pressure is maintained to keep mixed WHITE SAND FLOW GR 400 flowing.

Exposed areas of the grout surface should be kept as small as possible.

In hot weather, base plates and foundations must be shaded from direct sunlight.

Curing

To lower the rate of water evaporation, treat exposed surfaces with WHITE SAND-Cure curing compound or with continuous application of water and/or wet Hessian.

Cleaning

The material 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.

Thicknesses and Size Limitations

WHITE SAND FLOW GR 400 can be applied in a single layer at a thickness between 10 - 75 mm.

For greater thickness, an 8 - 12 mm washed aggregate should be added at a ratio of 14 - 15 kg of washed aggregate to 25 kg of WHITE SAND FLOW GR 400.

Packaging

WHITE SAND FLOW GR 400 is supplied in 25 kg / 50kg paper bags.

Yield

Approximately 12 - 13 liters per 25 kg bag.

Shelf Life and Storage

The original sealed packaging of WHITE SAND FLOW GR 400 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 FLOW GR 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 FLOW GR 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.

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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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