

Technical Data Sheet

White Sand FLOW GR 500

**Multi-purpose, Non-shrink, High-strength
Structural Grout**

Product Description

WHITE SAND FLOW GR 500 is a multi-purpose, high-strength, non-shrink, non-metallic cementitious grout designed for high-performance grouting applications.

WHITE SAND FLOW GR 500 is a ready-to-use product in a powder form, which requires only the on-site addition of water to produce a non-shrink, high-flowable grout.

WHITE SAND FLOW GR 500 is formulated for thicknesses applications up to 100 mm; however, it is suitable for use at a minimum thickness of 5 mm.

Features and Advantages

- High early strength development even at flowable consistency.
- High mechanical strength to compression and bending.
- High bond strength to steel and concrete.
- Adjustable consistency.
- Suitable for pumping & pouring applications.
- Impermeable.
- Formulated for middle east weather conditions.
- Grouting operations with relatively low exothermic heat.
- Low VOC & Emission.

Product Performance Properties

Type	One-component, pre-mixed cementitious powder
Color	Grey
Wet Density	2.2 kg/l approx.
Setting Time	4 hours @ 23 C
Compressive Strength (Flowable Consistency) (ASTM C109)	≥ 50 MPa @ 7 days ≥ 65 MPa @ 28 days
Flexural Strength (ASTM C348)	≥ 9.0 MPa @ 28 days
Bond Strength	≥ 1.0 MPa @ 7 days ≥ 2.0 MPa @ 28 days
Flowability (ASTM C1437)	0 minutes ≥ 300 % 30 minutes ≥ 280 %
Bleeding (ASTM C940)	Nil
Expansion (ASTM C827)	Up to 3 %
Chloride Content	Nil
VOC Content (ASTM D2369)	10.0 gm/liter (LEED Compliant)

Uses and Key Functions

WHITE SAND FLOW GR 500 is formulated for flowable or plastic consistency.

For bedding, grouting, and void filling operations greater than 20 mm, such as but not limited to:

- Grouting of equipment and machinery of thick section voids beneath base plates.
- Grouting & anchoring structural steel and precast concrete members.
- Void filling between old and new concrete.
- Repair work in precast elements.
- Anchor bolts.
- Anchoring a wide range of fixings such as anchor bolts, stanchion bases, masts, and fence posts.
- Foundation for machinery
- Micro-concreting in bridge and road maintenance operations.
- Filling the void between pipe & concrete in manholes/ water tanks.

Standard Compliance

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

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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 3.8 liters per 25 kg bag of WHITE SAND FLOW GR 500.

The powder of WHITE SAND FLOW GR 500 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.

In grouting thick sections and large pockets, use chilled water for mixing.

Placement

Pour the mixed WHITE SAND FLOW GR 500 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 sufficient head of pressure is maintained to keep mixed WHITE SAND FLOW GR 500 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.

Precautions

The temperature of both the grout and elements coming into contact with the grout should be in the range of +5°C to +35°C.

Do not use water in an amount or at a temperature that will produce a consistency more than recommended or cause mixed grout to bleed or segregate.

WHITE SAND FLOW GR 500 is formulated for thicknesses applications up to 100 mm; however, it is suitable for use at a minimum thickness of 5 mm.

For thickness > 100 mm WHITE SAND FLOW GR 500 shall be mixed with 10 kg of 6-10 mm washed aggregate per 25 kg bag.

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

WHITE SAND FLOW GR 500 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.

Packaging

WHITE SAND FLOW GR 500 is supplied in 25 kg bags.

Shelf Life and Storage

The original sealed packaging of WHITE SAND FLOW GR 500 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 500 to the skin should be washed off immediately with soap and clean water.

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

For prolonged irritation, seek medical advice.

WHITE SAND FLOW GR 500 is a non-flammable and not classified as a hazardous material under current legislation.

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 Tiling 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

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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