



RENDACOAT HF

Non Shrinkable Cementitious Grout

Composition and Application Field

RENDAGROUT HF is a single component non shrinkage cementitious grout. It is composed of OPC, silica sand, graded aggregates and specific admixture. It is a ready to mix powder with clean water to produce slurry cementitious fiber reinforced grout used for filling the gaps and repairing concrete structures.

Uses

RENDAGROUT HF is an ideal material for repairing and patching new concrete construction projects and maintenance, repair and renovation of old construction. It is used for interior and exterior vertical and horizontal applications.

Typical applications include the following:

- Where heavy duty is required such as crane rails.
- Honeycombing areas. Pile head treatment and reprofiling.
- Precast concrete panels. Concrete floor repairing.
- Reinforced concrete columns. Workshop, garages and service facilities.
- Repairing mortar for concrete slabs, columns and load bearing situations.

Advantages

- Easy-on application. Cost effective. Early compressive strength.
- Compatible with all cementitious substrates. Low water permeability. Non shrinkage mortar.
- Excellent adhesion to most commonly encountered building substrates.
- Suitable for vertical and horizontal applications in interior and exterior locations.
- Resistance to carbonation, sulphate and chlorinated water.
- Constructed up to 150 mm thickness as mortar and 300 mm as micro concrete. Low VOC.

Surface Preparation

The surface should be cleaned. In order to repair damaged area, cracks and honeycombs, laitance, dust and contaminants should be removed. The substrate also should be free from paint contaminations, oils, grease or any barrier between new mortar repair and main substrate.

New Concrete: Wet the surface by sweet water before applying **RENDACOAT HF**. This will support the binding with main substrate.

Old Concrete: The weak area should be removed by saw cutting, dust and loose debris should be removed and finally apply **BONDACOAT AR** as a primer coat. If reinforcing steel is exposed, **ZINCOAT EP** should be applied as anticorrosive paint before applying **RENDAGROUT HF**.

Prior to application, **RENDAGROUT HF** mortar should be stored under cover and protected from extremes of temperatures which may cause inconsistent workability and cure times for the mixed material.

In cold conditions, the application should be halted if the ambient temperature is likely to fall below 10°C. Pot life of the mixed material will be affected by ambient temperature.

Mixing

Depending on the workability desired, add a 25 kg bag to the minimum amount of clean water. The powder should be slowly added to the water and mixed using machine mixer until homogeneous and lump-free mortar is obtained. Micro concrete is obtained by adding 10 mm aggregate at mix ratio of **RENDAGROUT HF** to aggregate (2:1 by volume). Add additional water as required for desired consistency.

Water requirements per 25 kg bag are:

Plastic	3.0 to 3.5 liters
Flowable	4.0 to 4.5 liters
Micro concrete	3.4 to 4.2 liters

Application Method

Formworks and shatters should be tightly fixed and the corners sealed by rubber sealant to prevent leakage of water. The form should be fixed at a 50 mm away from the plate and extended at 25 mm above the bottom of the plate.

Flush clean water on the area to be repaired then apply **RENDAGROUT HF** on repaired areas with a steel trowel or scraper above the existing finished level.

Allow **RENDAGROUT HF** to dry to touch for approximately 6 - 8 hours depending on ambient temperature.

Curing

It is recommended to wet the surface once or twice a day for three days after application. The curing period depends on the thickness and atmospheric conditions.

Coverage

Dependence on the irregularity of substrate and the crack width and depth. The yield of mixture is approximately 20 liter of grout.

Cleaning

Tools and equipment's should be cleaned immediately using portable water.

Package

25 kg bag

Technical Properties

Mixed Density	1950 ± 100 kg/m ³
Pot life	1 hour at 30°C
Initial Setting Final Setting	3 hours at 30°C 5 hours at 30°C
Compressive Strength (ASTM C109)	3 days 15 N/mm ² 7 days 38 N/mm ² 28 days 70 N/mm ²
Flexural Strength (BS 6319 part 7)	3 days >3 N/mm ² 7 days >5 N/mm ² 28 days >10 N/mm ²
Tensile Strength 28 days (BS 6319 part 7)	>5.0 N/mm ²
Bonding Strength 28 days (ASTM C882)	>3.0 N/mm ²
Water Absorption	1.2 % maximum



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Storage and Shelf Life

Product should be stored at 25°C in dry conditions.
18 months in tightly closed container.

Health and Safety

The material should be applied in a good ventilated area. Avoid inhalation of the vapors. Use goggles and vinyl gloves. In case of eye contact, rinse immediately with plenty of clean water, do not use solvent and seek medical attention immediately. The product complies with environmental and occupational health and safety standards ISO 14001 and OHSAS 18001.