

## **RENDGROUT HF**

### **Non Shrinkage Cementitious Grout**

#### **DESCRIPTION**

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

#### **USE**

**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.
- Workshops, garages and service facilities.
- Repairing mortar for concrete slabs, columns and load bearing situations.

#### **ADVANTAGES**

- Easy-on application.
- Cost effectives.
- 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 any contaminations of paint, oils, grease or any barrier between new mortar repair and main substrate.

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#### ***New Concrete:***

Wet the surface by sweet water before applying **RENDAGROUT HF** will support the binding with main substrate.

#### ***Old Concrete:***

The weak area should be remove by saw cutting then remove all dust and loose debris then 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.

During application in cold conditions, correct conditioning can help, but 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 mix by 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**

Formworks and shattering should be tightly fixed and sealed the corners by rubber sealant to prevent the 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 the bed and repair 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 in a day for three days of application. The curing period depends on the thickness and atmospheric conditions.

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#### **TECHNICAL PROPERTIES**

Test	Result
Mixed Density	1950 ± 100 kg/m <sup>3</sup>
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 <sup>2</sup> 7 days 38 N/mm <sup>2</sup> 28 days 70 N/mm <sup>2</sup>
Flexural Strength (BS 6319 part 7)	3 days >3 N/mm <sup>2</sup> 7 days >5 N/mm <sup>2</sup> 28 days >10 N/mm <sup>2</sup>
Tensile Strength 28 days (BS 6319 part 7)	> 5.0 N/mm <sup>2</sup>
Bonding Strength 28 days (ASTM C882)	> 3.0 N/mm <sup>2</sup>
Water Absorption	1.2 % maximum

#### **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 can be cleaned immediately by using potable water.

#### **PACKAGE**

25 kg bag.

#### **STORAGE**

Product should be stored at 25°C in dry conditions.

#### **SHELF LIFE**

12 months in tightly closed container.

#### **HEALTHY AND SAFETY**

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

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