

REC GROUT 750

NON-SHRINK HIGH-STRENGTH FLUID MICRO-CONCRETE

DESCRIPTION

REC GROUT 750 is a ready-to-use micro-concrete made from selected sands and aggregates, special cement, and additives to provide durable properties. It can be used where high compressive strength is required. **REC GROUT 750** is specially formulated to produce a shrinkage-compensating micro-concrete with high performance. **REC GROUT 750** can be applied in thicknesses ranging from 50 mm to 300 mm per layer, although greater thicknesses of up to 500 mm can be achieved depending on the design of the repair job and the level of steel reinforcement.

SCOPE OF USE

- Pile head repair.
- Assembly of precast parts made of reinforced or prestressed concrete.
- General void filling, such as coring in concrete and jointing.
- Keying bridges.
- Casting foundations for industrial equipment and heavy machinery.
- Deep repair of structural concrete elements such as slabs, beams, columns, and footings.
- Concrete jacketing.
- Closing or filling around pipes in water tanks and swimming pools.

KEY FEATURES

- Non-shrinking.
- Durable.
- Low water absorption.
- Low RCP.
- High strength.
- Easy to apply.
- Resistant to seawater and sulfates.
- Excellent resistance to vibration and shock loads.

TECHNICAL INFORMATION

Appearance	Grey powder + aggregates
Free from chlorides and metallic particles	Yes
Grain size	0–10 mm
Powder density	1.8
Setting time (ASTM C403) – Initial	Approximately 5 hours
Setting time (ASTM C403) – Final	Approximately 6 hours 30 minutes
Compressive strength at 22°C ± 1°C (BS 1881 Part 116) – 7 days	55 N/mm ²
Compressive strength at 22°C ± 1°C (BS 1881 Part 116) – 28 days	70 N/mm ²
Flexural strength at 22°C ± 1°C (BS 1881 Part 118) – 28 days	>10 N/mm ²
Water absorption (BS 1881 Part 122)	Less than 1.2% at 32 days
Chloride permeability (ASTM C1202-05)	Low
Fresh density (ASTM C185-02, Section 5.5)	2.48 ± 0.05

NOTE: Results may vary due to statistical variations and differences in mixing methods and equipment, temperature, application methods, test methods, actual site conditions, and curing conditions.

APPLICABLE STANDARD

BS 1881: Part 122:1983, ASTM C403/C403M-05, ASTM C1202-09, ASTM C138:01

DIRECTIONS FOR USE

SUBSTRATE PREPARATION

REC GROUT 750 may be applied to sound concrete, masonry, rock, or similar materials. Remove damaged concrete and laitance by chipping with a pick or cold chiseling to obtain a rough surface. The surface must also be free from any traces of grease or oil. Saturate the surface with water by copiously spraying it just before application and, if possible, approximately 6 hours before application as well. At the time of application, the area should be free from standing water but remain damp.

PRODUCT PREPARATION

The micro-concrete is obtained by mixing the 39 kg kit of Rec Grout 750 with 2.75 to 3.1 litres of clean water. For the 78 kg kit, use approximately double the quantity of water. The amount of water used depends on the required workability. Add the powder and aggregates to the water and mix for 3 to 5 minutes. Mixing should be carried out in a suitably sized, heavy-duty drum mixer. The mixed material should be applied promptly after mixing. Do not mix with other hydraulic binders. The use of additives is prohibited.

STRUCTURAL STRENGTHENING

REC GROUT 750 can be used when additional bonded reinforced or non-reinforced micro-concrete is required on an existing structural member in the form of an overlay or jacket. In the structural strengthening of columns, beams, slabs, and walls, their respective sections can be enlarged to increase their load-bearing capacity and stiffness. A typical enlargement is approximately:

- 5 to 7.5 cm for slabs.
- 7.5 to 13 cm for beams and columns.

The existing surface needs to be roughened and cleaned. Ensure that the surface is dampened with water before application. Higher thicknesses can be achieved provided the existing structure to be strengthened is reinforced with anchoring dowels using pure epoxy. In such cases, top steel reinforcement is recommended according to the appropriate structural design. If the application temperature is higher than 35°C, use cold water to keep the temperature of the freshly mixed micro-concrete below 30°C.

CONSUMPTION

A 78 kg kit + 6.2 litres of water gives a volume of approximately 34 litres.

PACKAGING

REC GROUT 750 is supplied in various packaging sizes and quantity of the product varies with the demand of clients.

STORAGE

Shelf life is 12 months from the date of manufacture when stored in the original, unopened packaging, under cover, in dry conditions, away from humidity, and protected from extreme temperatures and direct sunlight.

SAFETY PRECAUTIONS

While using the product, gloves, a mask, and safety goggles should be worn. Splashes on the skin or in the eyes should be washed immediately with clean water. In case of prolonged irritation, seek medical advice.

QUALITY STATEMENT

All our products are manufactured to comply with our internal quality management system to ensure consistency and quality.

DISCLAIMER

While the company guarantees its products against defective materials, the use and application of these products are made without guarantee since the conditions of their application are beyond its control. It is recommended to verify with the company that the product is suitable for the intended use. This Data Sheet version is the latest one. The company may modify it without any prior notice. Technical characteristics are listed for guidance only. For more information, please contact the company's head office located in Lahore.

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