

StrongGrout F70 Premix

High Strength, Dual Expansion - Shrinkage Compensated Microconcrete

Descriptions

StrongGrout F70 Premix is a special formulated grout, which impart controlled expansion in both the plastic and hardened states. **StrongGrout F70 Premix** is a pumpable non-shrink, flowable, cementitious grouting microconcrete with extended working time to suit local ambient temperature. It is supplied as a ready to use dry powder plus high strength aggregate.

The addition of a controlled amount of clean water produces a free-flowing precision grout for gap thickness more than 100 mm. In addition, the low water requirement ensures high early strength and long-term durability. The filler grading minimizes segregation and bleeding over a wide range of application consistencies.

Standard Compliance.

- ASTM C109 ; ASTM C348
- ASTM C940 ; ASTM C403
- ASTM C1202

Uses

StrongGrout F70 Premix is suitable for repairs to concrete structures and the following grouting works with clearance of 50 mm or more.

- Machine foundations
- Columns, beams and slabs repair
- Piles, pile caps repair
- Bridges repair

Advantages

- Easy to mix and apply
- Two step expansion in both the plastic and hardened states
- High Early Strength enables rapid installation and early operation of plant
- Excellent flow and flow retention
- Non-toxic and non-corrosive
- Chloride and hydrogen free gas expansion
- Impact and vibration resistant
- Suitable for pumping or pouring over a large range of application consistencies and temperatures.

Physical Properties

Water / powder ratio = 0.13

Test Method	Typical Result
Compressive Strength ASTM C109	> 30 N/mm ² @ 1 day > 54 N/mm ² @ 7 days > 65 N/mm ² @ 28 days
Flexural strength	> 8 N / mm ² @ 28 days
Expansion ASTM C940	0.5 – 2.0 %
2 nd Expansion	After hardening stage
Setting Time ASTM D403	4 hr (initial) 6 hr (final)
Fresh wet density	2200 ± 0.05 kg/m ³
Ion Chloride Permeability (Coloumbs)	1.2 mm/ mm

Application Instructions

Surface Preparation

Concrete surfaces should be clean, sound and free from oil, grease, laitance and loosely adhering particles. Metal surfaces (iron and steel) should be free from scale, rust, oil and grease.

All absorbent surfaces must be well saturated with clean water, but be free of any surface water or puddles prior to the application of **StrongGrout F70 Premix**. Form a leak proof formwork as **StrongGrout F70 Premix** is a free flowing grout. The gap width between the perimeter formwork and the plate edge should not exceed 150mm on the pouring side and 50mm on the opposite side.

Refer to mixing ratio guide for water: grout ratio mix for 2 to 3 minutes with a slow speed drill (max. 500 RPM)

Mixing

StrongGrout F70 must be thoroughly mixed. A forced-action mixer is essential. Mixing in a suitably sized drum or pail using an approved spiral paddle in a slow speed (400/500 rpm) heavy-duty drill is suitable. Mixing of part bags is not recommended. It is essential that machine mixing capacity and labour availability is adequate to enable the placing operation to be carried out continuous grouting works. Measure 4.0 – 5.0 litres clean water and pour three-quarters into the drum.

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With the machine in operation, add one full 30 kg bag of **StrongGrout F70 Premix** and mix for one minute before adding the rest of the water. Mix for a further 2 to 3 minutes until a smooth even consistency is obtained. The quantities mixed may be scaled up as required. When the drill and paddle mixing method is used, the complete 4.0 – 5.0 litres of water should be placed in the mixing drum. While the paddle rotation, add one full 30 kg bag of **StrongGrout F70 Premix** and mix for 2 to 3 minutes until a smooth even consistency is achieved.

Application

After mixing, stir lightly with a spatula for a few seconds to release any entrapped air. The grout is then poured immediately into the prepared formwork. When carrying out base plate grouting, maintain sufficient pressure head for uninterrupted mortar flow. The prepared formwork must be firmly in place and kept watertight.

When placing grout over a large area, it is important to maintain a continuous flow throughout. Organize proper work sequence to ensure uninterrupted flow. In large areas, pump **StrongGrout F70 Premix** with a heavy-duty diaphragm pumps. Screw feed and piston pumps may be used. For such mixes, a conventional concrete mixer and pump may be used. To further ensure that air entrapped during mixing allowed to fully escaping, it may be necessary to make breather holes. Use steel rods or chains to assist the flow of grout where necessary.

Curing

On completion of the grouting operation, all exposed areas that are not to be cut back should be thoroughly cured. Apply suitable curing membrane or continuous application of water after initial set for curing purpose

Packing & Size

StrongGrout F70 Premix 30 kg bag

Yield

The quantity of clean water required to add to a 25kg bag grout to achieve the desired consistency is

StrongGrout F70 Premix 30 kgs will yield 15.5 liters for fluid consistency or 64.5 bags for 1 m³ mixed grout.

Storage

StrongGrout F70 Premix should be stored on pallets in dry conditions. Under these conditions, the product will have a shelf life of 12 months.

Precaution

StrongGrout F70 Premix is alkaline and should not be in contact with skin and eyes. Avoid inhalation of dust during mixing. Wear gloves, goggles and dust mask.

Technical Support

Estrong manufactures and sells a comprehensive range of high performance, high quality of product for both new and existing concrete surfaces. In addition, the company offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.