

# 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.

**StrongGrout F70 Premix** has been tested in accordance to ASTM C942:1999, on Compressive Strength Test and complied with the specification in this data sheet.

### 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
- Brigdes 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 <sup>2</sup> @ 1 day > 52 N/mm <sup>2</sup> @ 7 days > 64 N/mm <sup>2</sup> @ 28 days
Flexural strength ASTM C348	> 10.5 N/mm <sup>2</sup> @ 28 days
Expansion ASTM C940:1998	0.5 – 2.0 %
Time of Expansion	Start : 30 min Finish : 2 hours After hardening stage
2 <sup>nd</sup> Expansion	After hardening stage
Fresh wet density	2230 kg/m <sup>3</sup>
Rapid 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 150 mm on the pouring side and 50 mm 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)

#### 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.

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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 25 kg 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 m<sup>3</sup> 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.