

StrongGrout G70 Premix

**Premixed, High Strength and Flowable
Microconcrete**

Description

StrongGrout G70 Premix is a high performance flowable, high strength micro concrete which has controlled expansion in the plastic stage. **StrongGrout G70 Premix** is a blend of Portland Cement, silica sands, graded aggregate, chemical additives which impart controlled expansion in the plastic state plasticizer for minimizing water demand to achieve high strength. The graded fillers are designed to aid uniform mixing and to eliminate bleeding and segregation under pumping pressures. The low water requirement ensures fast strength gain and long-term durability of the construction.

Uses

StrongGrout G70 Premix is recommended for use in general purpose groutings where thickness is required. It is recommended for grouting of the following applications :

- base plates of heavy duty machineries
- strengthening and repairs of structural concretes, such as columns, beams, decks.
- Piles and other marine structures.

Advantages

- Prepack material, ready to use only with addition of water
- High early strength and high strength for long term durability
- Flowable, easy to apply and allow self compaction.
- Low permeability provide maximum protection against CO₂ and chloride.
- Non shrink, provide expansion at plastic stage
- Low alkali content minimises risk of alkali-silica reaction.

Standards Compliance

- ASTM C109 : 2020
- ASTM C1202 : 2016
- ASTM C940 : 2016

Physical Properties

Test Method for Fresh wet density:
Water powder ratio at 0.13 (28°C)

Test Method	Typical Result
Compressive Strength ASTM C-109	35 N/mm² @ 1 day 56 N/mm² @ 7 days 65 N/mm² @ 28 days
Flexural Strength ASTM C-348	6.5 N/mm ² @ 28 days
Expansion Characteristics ASTM C940	0.3 – 2.0 %
Setting Time	Initial : 5 hours Final : 6 hours
Water Requirement	4 liters
Fresh wet density	2,300 ± 0.05 kg/m³
Rapid Chloride Permeability (Coloumbs)	1.2 mm/ mm

Application instructions

Preparation

StrongGrout 70 Premix should be applied where unrestrained surface area of the repair must be kept to a minimum. The formwork should include drainage outlets for pre-soaking and, if beneath a soft, provision for air venting. Provision must also be made for suitable access points pour or pump the mixed micro-concrete into place. Substrate shall be free from any contaminated material, loose particle, oil, paint, grease etc. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or grit-blasting.

Expose fully corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process.

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Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with the clean water immediately after grit-blasting to remove corrosion products from pits and imperfections within its surface.

Substrate Priming

Substrates should be saturated by filling the prepared formwork with clean water. Prior to the application of Estrong Microconcrete any excess water should be removed.

Mixing

StrongGrout G70 Premix must be thoroughly mixed. A forced-action mixer is essential. Mixing in a suitably sized drum using an method is used, the complete 2.4 – 2.8 litres of water should be placed in the mixing drum. While the paddle rotation, add one full 30 kg bag of **StrongGrout G70 Premix** and mix for 2 to 3 minutes until a smooth even consistency is achieved with approved spiral paddle in a slow speed (400/500 rpm) heavy-duty drill is acceptable. Free-fall mixers must not be used. 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 continuously. Measure 4.0 – 5.0 litres clean water and pour three-quarters into the mixer. With the machine in operation, add one full 30 kg bag of StrongGrout G70 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.

Placing

The mixed material should be placed within 30 minutes of mixing in order to gain the full benefit of fluidity and of the expansion process.

Curing

The formwork should be left in place until the compressive strength of the **StrongGrout G70 Premix** is > 15 N/mm² or as otherwise specified by the Supervising Officer. The applied products must be cured immediately after the formwork is stripped, sprayed with a liquid curing membrane such as **StrongCure**

Packing & Yield

StrongGrout G70 Premix is packed in 30 kg bag.

Yield : 15.2 liter / bag or 1 m³ requires 67 bags (based on standard water, actual yields depending on water added)

Limitation

StrongGrout G70 Premix is not suitable to be used for unrestrained grouting.

Cleaning

StrongGrout G70 Premix should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Storage

StrongGrout G70 Premix should be stored on pallets in dry conditions. Under these conditions, the product will have a shelf life of 12 months.

Technical Support

Estrong offers a comprehensive range of high performance, high quality of repair 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.

