StrongGrout G70

High Strength Non Shrink Grout for New Structures & Repairs

Description

StrongGrout G70 is cementitious non-shrink grout provides high flexural and compressive strength performance. It is a prepacked and ready to use product and only requires addition of water to produce a flowable non shrink grout for especially used for general structures and repairs, as well as for marine structures.

StrongGrout G70 is formulated from a blend of Portland Cement, graded fillers, expanding agent and chemical additives which impart controlled expansion in the plastic and hardening stages while using minimum water in the mix. The graded silica sand ensures consistent flow and workability. The low water requirement contributes fast strength gain and long-term durability.

Uses

StrongGrout G70 is used for grout and repair of new structures and general purpose grouting application. It is recommended for grouting of base plate, strengthening and repairs of structural concrete, such as columns, beams, decks etc.

Advantages

- Prepacked material, ready to use to avoid batching on site
- High early strength and high compressive strength.
- Low permeability provides maximum protection against CO2 and chloride.
- Fluid consistency allows self compaction.
- Non shrink, provide expansion at plastic stage and hardening stage
- Non chloride content.
- Low alkali content minimises risk of alkali-silica reaction.

Standards Compliance

- ASTM C109 ; ASTM C348
- ASTM C827; ASTM C230
- ASTM C940 ; ASTM C403
- ASTM C1202

Physical Properties

Test Method for Fresh wet density:
Water-powder ratio at 0.18 (28°C)

Test Method	Typical Result
Compressive Strength ASTM C109	**> 30 N/mm2 @ 1 day** **> 54 N/mm2 @ 7 days** **> 65 N/mm2 @ 28 days**
Flexural strength ASTM C348	> 8 N / mm2 @ 28 days
Flow of Grout ASTM C230	>190 mm
Expansion ASTM C827 (Height Change)	0.4 – 2.0 %
Bleeding ASTM C940	< 0.2 %
Setting Time ASTM C403	4 hr (initial) 6 hour (final)
Fresh wet density	**2,200 ± 0.05 kg/m3**
Chloride Ion Permeability (Coloumbs) ASTM C1202	1.2 mm/ mm

Application instructions
Preparation

The 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.
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 form pits and imperfections within its surface.

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Substrate Priming

Substrates should be saturated by filling the prepared formwork with clean water. Prior to the application of **StrongGrout G70** any excess water should be removed.

Mixing

StrongGrout G70 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. With the machine in operation, add one full 25 kg bag of **StrongGrout G70** 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 miximethod 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 25 kg bag of **StrongGrout G70** and mix or 2 to 3 minutes until a smooth even consistency is achieved.

Packing

StrongGrout G70 is packed in 25 kg bags.

Yield

StrongGrout G70
1 bag 25 kgs → yield : 13.0 litres
77 bags @ 25 kg → yield : 1 m^3
(based on standard water, actual yields depending on water added)

Limitation

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

Cleaning

Use clean water to remove remaining grout from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Technical Support

Estrong offers hig performance, high quality of products for both new and existing concrete surfaces. The company provides a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.

Storage

StrongGrout G70 should be stored on pallets in dry and shaded conditions where under such conditions, the product will have a shelf life of 12 months.

Precaution

StrongGrout G70 should not be in contact with sensitive skin and eyes. Avoid inhalation of dust during mixing. Wear gloves, goggles and dust mask.

Additional Information

Estrong manufactures and sells wide range of construction chemical products, such as waterstops, waterproofing products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spalled concrete are available