

StrongGrout G50

General Purpose Non Shrink Grout

Description

StrongGrout G50 is general used non shrink grout with controlled expansion in the plastic stage, supplied as a ready to use only with addition of water. **StrongGrout G50** is formulated with Portland Cement, graded silica sand and chemical additives with controlled expansion in the plastic state whilst minimising water demand to achieve high strength. The low water requirement ensures fast strength gain and long-term durability.

Uses

StrongGrout G50 is used for general purpose grouting works. It is recommended for grouting of base plate, strengthening and repairs of structural concretes, such as columns, beams, decks and precast works.



Advantages

- Prepacked material, ready to use only with addition of water.
- High early strength and high strength.
- Fluid consistency allows self compaction.
- Non shrink, provide expansion at plastic stage
- Non chloride content.
- Low alkali content minimises risk of alkali-silica reaction.
- Low permeability provide maximum protection against CO₂ and chloride.

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 0.16 (28°C)

Test Method	Typical Result
Compressive Strength ASTM C109	> 20 N/mm ² @ 1 day > 38 N/mm ² @ 7 days > 54 N/mm ² @ 28 days
Flexural strength ASTM C348	> 7 N / mm ² @ 28 days
Flow of Grout ASTM C230	> 240 mm
Expansion ASTM C827 (Height Change)	0.5 – 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 G50** any excess water should be removed.

Mixing

StrongGrout G50 must be thoroughly mixed. A forced-action mixer is essential. Mixing in a suitably sized drum using a 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 25 kg bag of **StrongGrout G50** 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 – 4.5 litres clean water and pour three-quarters into the mixer. With the machine in operation, add one full 25 kg bag of **StrongGrout G50** 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.

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 G50** is 15 N/mm² or as otherwise specified by the Supervising Officer. **StrongGrout G50** must be cured immediately after the formwork is stripped, sprayed with a liquid curing membrane such as StrongCure P.

Packing & Size

StrongGrout G50 is packed in 25 kg bag.

Yield

StrongGrout G50

25 kg bag yield → 13.2 ltr
or 76 bags → yield 1 m³
(based on standard water, actual yields depending on water added)

Limitation

StrongGrout G50 is not suitable to be used for unrestrained grouting works.

Cleaning

StrongGrout G50 should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Storage

StrongGrout G50 should be stored on pallets in dry conditions. Under these conditions, the product will have a shelf life of 12 months.

Precaution

StrongGrout G50 should not be in contact with skin and eyes. Avoid inhalation of dust during mixing. Wear gloves, goggles and dust mask.

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.

Additional Information

Estrong manufactures and offers a wide range of complementary products, which includes waterstops, waterproofing.