

Plasticised expanding grout additive

Uses

Cebex FCC422 is used as a cementitious grout additive where a low water/cement ratio and a medium expansion is required.

Applications include bed grouting, non-shrink infilling and jointing, joint filling between pre-cast concrete units, grouting of voids in structural members, grouting of pipe joint and normal repair work where shrinkage must be avoided.

Advantages

- Non-shrink properly ensures retention of original volume. Easy flow facilitates ease of placement.
- Reduced water/cement ratio ensures low permeability and long term performance in service.
- High compressive strength in the range of 40N/mm² after 28 days, when using good OPC.
- Facilitates the production of a cohesive grout.

Description

Cebex FCC422 is supplied as a powder additive.

The material is a combination of a plasticising agent, and a gas producing expansive medium, with suitable fillers; which generates gas during the hydration process before the initial set takes place, counteracts the natural settlement and shrinkage of the grout. Stability and cohesion of grout are greatly increased. The selected fillers used ensure uniform mixing.

Expansion is controlled to avoid excess pressure built up but sufficient pressure is developed to provide complete contact of the grout with the bearing surfaces, without voids.

Technical Support

Fosroc offers a comprehensive range of high performance, high quality concrete repair and construction products. In addition, Fosroc offers technical support service to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the country.

Specification clauses

All bed grouting, joint filling, void grouting etc., carried out using cement or cement sand grout shall be incorporated with a plasticising grout additive. The additive shall not shrink and shall provide a controlled expansion to ensure complete filling of voids. It shall facilitate production of more cohesive grout at a reduced water / cement ratio. It shall be compatible to all types of ordinary portland cements. It shall aid in the development of high compressive strengths in the order of 40N/mm² @ 28 days when used with good OPC.

Application instructions

Dosage

5kg of Cebex FCC422 to be added for each bag of ordinary portland cement (50kg) at water / cement ratio of between 0.40 and 0.44. The additive is compatible to all types of Ordinary Portland Cement but not to high alumina cement.

The following are typical values obtained with Cebex FCC422 added as described and with the cubes cured under restraint. Size of the cube moulds used was 70.6mm x70.6mm x70.6mm.

Cement (OPC) : Sand (Zone 3) = 50kg : 50 kg

Water Cement ratio : 0.42

Cebex FCC422 : 5 kg or 10% by weight of cement.

	1D	3D	7D	
28D				
Compressive Strength in N/mm ²	10	20	32	40

Mixing

Always mix cement and fine sand (zone 3) in the ratio of 1:1 by wt. Fresh OPC should be used for best results.

For best results we recommend mechanical mixing. A free fall concrete mixer can be used for large volume mixing (50kg cement and above). For smaller volume, a drilling machine fitted with a paddle can be used.

If hand mixing becomes inevitable, a large fabricated tray can be used for mixing to prevent debris contaminating the grout and to avoid loss of grout flowing out of control.

To ensure uniform dispersion of the additive, cement, sand, Cebex FCC422 should be mixed thoroughly in dry condition and then with precisely measured quantity of water. Water to cement ratio can be 0.4 to 0.44, depending on the type of cement, sand and workability required.

Free fall concrete mixer

Place about 80% of the required water in the drum :

- (a) While the mixer is running cement, sand and Cebex FCC422 dry mix should be added. After all the powder is added, the balance 20% water be added and mixed for atleast 5 minutes. OR (b) Cement, sand should be added to the mixer. Then Cebex FCC422 should be added slowly and mixed for 5 minutes after all the additive is added.

Cebex FCC422

Drilling machine with paddle

Use a slow speed (geared) drilling machine. Use a suitable container for mixing. Mix the grout as described in the case of Fall Mixer.

Hand Mixing

Thorough mixing of cement, sand and Cebex FCC422 in dry condition must be done prior to the addition of water.

Placing

Surfaces to come in contact with the grout should be cleaned free from dust, debris, oil and other foreign material.

The concrete surfaces should also be prewetted with water for atleast 24 hours. All surface water should be removed before grouting.

Curing

On completion of grouting operation, exposed areas which are not to be cut back should be thoroughly cured by means of water ponding or wet hessian for minimum of 15 days. Our membrane curing compound, Concure WB (see separate datasheet for details) can also be used effectively.

Estimating

Packaging

Cebex FCC422 is supplied in 5 kg bags.

Storage

Shelf life

6 months if kept in a dry store in its original packing.

Precautions

Health and Safety instructions

Cebex FCC422 is alkaline in nature. Gloves should be used while handling the product. Splashes to the eye and body should be washed off with clean water. If irritation persists, medical advice should be sought.

Additional information

Fosroc manufactures a wide range of products specially designed for the repair and refurbishment of damaged reinforced concrete. This includes repair mortars, fluid micro-concretes, chemical resistant epoxy mortars in addition to comprehensive package of protective coatings. In addition, a wide range of complementary products are available. This includes joint sealants, waterproofing membranes, grouts and anchors and specialised flooring materials. Separate datasheets are available on these products.

Important note :

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.



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