



Fosroc Cebex 100

(Formerly Conbex 100)

Plasticised expanding grout admixture

Uses

Cebex 100 is an admixture for cementitious grouts and concrete where a reduced water/cement ratio and positive expansion is required. Applications include bed grouting, duct grouting, non-shrink infilling and jointing.

Advantages

- Gaseous expansion system compensates for plastic shrinkage and settlement in properly designed cementitious grout.
- Reduced water/cement ratio in the grout mix ensures low permeability and long-term durability in service.
- Gives high grout fluidity with low water/cement ratio, thus making placement or injection of the grout easy.
- No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout.
- Composition allows high early strength development in grouts, without the use of chlorides.

Standards compliance

Cebex 100 is a suitable pre-stressing grout admixture when complying with BS 8110 Part 1, 1985, section 8.9.4.6.

Description

Cebex 100 is supplied as a powder admixture. The material is a combination of a plasticising agent and a gas-producing expansion medium. The plasticising agent allows the use of a reduced water/cement ratio with consequent increased strength and durability. The expansive medium counteracts the natural settlement and plastic shrinkage of the grout and aids stability and cohesion.

Sufficient restrained expansion is developed to ensure a high degree of interfacial contact.

Specification

Performance specification

All grouting (specify details and areas of application) must be carried out with a cement based grout incorporating a plasticised, expanding powder admixture. The admixture must be iron-free and chloride-free and shall be added to the grout in the proportions 225 g of admixture per 50 kg of cement. The admixture shall provide an expansion of up to 4% in the plastic grout, by means of a gaseous system. The admixture must be stored, handled and mixed strictly in accordance with the manufacturer's instructions.

Supplier specification

All grouting (specify details and areas of application) must be carried out using a cement based grout, incorporating Cebex 100 manufactured by Fosroc and applied strictly in accordance with the manufacturer's technical data sheet.

Properties

Chloride content	: Nil to BS 5075
Compressive strength	: The plasticising action of Cebex 100 allows reduction of the water/cement ratio of cementitious grouts whilst maintaining flow properties. This gives improvement in strength and long term durability when cured under restraint.
Setting times	: Cebex 100 does not significantly affect the setting times of cement based grouts.
Expansion characteristics:	The controlled positive expansion in unset grouts incorporating Cebex 100 overcomes plastic settlement when measured in accordance with ASTM C827. An unrestrained expansion of up to 4% is typical.
Time for expansion	: 15 minutes - 2 hours. Temperatures above 20°C may slightly reduce these times.
Compatibility	: Cebex 100 is compatible with all types of Portland cement. Cebex 100 may be used in mixes containing certain other Fosroc admixtures. Consult Fosroc for further information.

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Instructions for use

Mixing

For best results Fosroc MR3 mixer must be used. For quantities up to 50 kg a slow speed drill fitted with a high shear paddle is suitable. Larger quantities will require a high shear vane mixer.

It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity.

The selected water content should be accurately measured into the mixer. Slowly add the cement (and sand if required) and Cebex 100. Mix continuously for 5 minutes, making sure that a smooth even consistency is obtained.

Application

Areas to be grouted should be prepared to ensure substrates are clean, sound, and then pre-wetted. The unrestrained surface area of the grout must be kept to a minimum. Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process. Adopt usual placing or pumping procedures ensuring a continuous operation.

Curing

On completion of the grouting operation, any exposed areas which are not to be cut back should be thoroughly cured by means of water application, Concure* curing membrane or wet hessian.

Cleaning

Grouts mixed with Cebex 100 should be removed from tools and equipment with clean water immediately after use. Remove cured material mechanically or with Fosroc Acid Etch*†.

Limitations

Cebex 100 is not compatible with High Alumina Cement.

Estimating

Supply

Cebex 100 : 15 kg

Dosage

OPC	Concreting sand	Water	Cebex 100	Approx yield
50 kg	-	20-22 litres	225 g	36 litres
50 kg	50 kg	22-24 litres	225 g	57 litres

Note: For grout, mortar or concrete mixes with an aggregate/cement ratio more than 1, use 4x225 g units or 900 g of Cebex 100 per 100 kg of cement.

Effects of overdosing

Overdosing of Cebex 100 increases expansion and may cause frothing.

Storage

Cebex 100 has a shelf life of 12 months if kept in a dry store in its original packaging. High temperature and humidity storage may reduce this period.

Precautions

Health and safety

Cebex 100 is of low hazard.

Contact with the skin and eyes, or inhalation of dust should be avoided. Wear suitable protective clothing, gloves, eye/face protection and dust mask. After contact with skin, wash off with clean water. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.

For further information see Product Material Safety Data sheet.

* Denotes the trademark of Fosroc International Limited

† See separate data sheet



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