

Pre-bagged, non-shrink cementitious grout for post tensioned cable duct grouting

Uses

Conbextra Cable Grout is used for grouting of PT cable ducts. The product can also be used for grouting ground anchors with small gaps.

Advantages

- Prepackaged Material overcomes potential on-site batching variations
- High flow characteristics result in effective filling of small gaps around cables
- Negligible Bleed
- Shrinkage compensated

Standards Compliance

The product complies with EN 447 guidelines when tested as per EN 445. The product also complies with MORTH/IRC guidelines for fluidity, bleeding & strength.

Description

Conbextra Cable Grout is supplied as a ready to use dry powder. With addition of recommended amount of water the product yields a free flowing non-shrink grout .

Conbextra Cable Grout is an all fines mix based on Portland cements and additives which impart High flow characteristics, Negligible bleed and controlled expansion in the plastic state whilst minimising water demand.

Technical support

Fosroc offers a comprehensive range of high quality, high performance construction products. In addition, Fosroc offers technical support and on-site service to specifiers, end-users and contractors.

Specification

Performance specification

The PT cable ducts shall be grouted using a Pre-Packaged , all fines cementitious grout requiring only water addition at site .

The prepared grout should comply with EN 447 guidelines in terms of Fluidity & retention , Bleeding (< 0.3 %) expansion (upto 2%) when tested as per EN 445 test protocol.

The storage, handling and placement of the grout must be in strict accordance with the manufacturer's instructions.

Supplier specification

All grouting where shown on the drawing must be carried out using Conbextra Cable Grout manufactured by Fosroc and used in accordance with the manufacturer's current data sheet.

Properties

	Testing Protocol	Conbextra Cable Grout
W/P ratio		0.33-0.35
Density		2.00 g/cc
Fluidity	EN 445	Efflux Time < 25 Sec
Bleed	EN 445-Wick Induced Bleed test	<0.3%
Volume Change	EN 445	Upto + 2%
Setting time	EN 445	
Initial		> 3 Hrs
Final		< 24 Hrs
Compressive Strength		Conbextra Cable Grout
7 Days	ASTM C109-50 mm cube	>27 Mpa
28 Days		>30 Mpa

Note: The variable water powder ratio is mentioned due to the variation in ambient temperatures and also the type of mixing equipment. The results mentioned above are at maximum permissible W/p ratio 0.35.

Instructions for use

Preparation

All ducts shall be flushed with lime water before grouting. Care should be taken to plug any leakages in the duct

Mixing and placing - Application

Mixing

For best results a high shear colloidal mixer or a high speed paddle mixer with minimum 1500 RPM should be used . The mixing should be done in grout plant with Mixer , collector with slow speed agitator and pump.

The maximum permissible water content of Conbextra Cable Grout is 8.75 ltrs.

Conbextra Cable grout : The water content can be reduced depending upon temperature conditions and type of mixing.

Conbextra Cable Grout

During high temperature, it is recommended to use cold water to maintain grout temperature at 25 deg. C.

The water should be accurately measured into the mixer. The total contents of the Conbextra Cable Grout bag should be slowly added and continuous mixing should take place for 5 minutes. This will ensure that the grout has a smooth even consistency.

Curing

Any exposed areas should be thoroughly cured. This should be done by the use of Concure curing membrane

Cleaning

Conbextra Cable Grout should be removed from tools and equipment with clean water immediately after use. Cured material can be removed mechanically, or with Fosroc Acid Etch.

Sampling procedure

All sampling procedures for Conbextra Cable Grout are to be conducted within the confines of a temperature controlled laboratory. The reactive agents within Conbextra Cable Grout HS do not permit site sampling and transport. The procedure for sampling is to be as follows:

- 1) A full and unopened bag of Conbextra Cable Grout to be selected from the batch allocated for site use and despatched to the testing laboratory.
- 2) The Conbextra Cable Grout shall be mixed in the laboratory following the instructions listed on the product data sheet.
- 3) All sampling shall be conducted using 50 mm cube moulds, any other size is not permissible.
- 4) When mixed, the Conbextra Cable Grout shall be poured into 50 mm cube moulds, treated with release agent, in two lifts of 25 mm each with a 60 second interval between pours. The Conbextra Cable Grout shall not be tamped, but gentle tapping of the cube mould is permitted to promote the release of air.
- 5) Fill three 50 mm cube moulds with the Conbextra Cable Grout for each curing time interval specified. Mould filling should be completed within 15 minutes of the end of the mixing cycle. The filled moulds should be stacked three high on top of each other to provide conditions of restraint. The top mould should be restrained either with a weighted metal plate or an empty cube mould
- 6) The cubes should be stored at 27°C temperature for 24 hours in the laboratory. After 24 hours the cubes are to be demoulded and placed in a water curing tank maintained at 27°C

temperature. The cubes are then to be cured in accordance with BS1881. These are to be removed after the grout has hardened, they should be treated with a thin layer of grease.

7) Cubes are to be crushed in calibrated compression testing apparatus with a rate of loading not exceeding 1.4KN per minute. Types of cube fracture are to be recorded. Three cubes are to be crushed for each curing time interval specified. Results are to be calculated and issued as an average.

Limitations

Low temperature working

For ambient temperatures below 10°C the formwork should be kept in place for at least 36 hours.

When the air or contact surface temperatures are 5°C or below on a falling thermometer, warm water (30-40°C) is recommended to accelerate strength development.

Normal precautions for winter working with cementitious materials should then be adopted.

High temperature working

It is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:

- (i) Store unmixed material in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- (ii) Keep equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.
- (iii) Try to eliminate application during the hottest times of the day.
- (iv) Make sufficient material, plant and labour available to ensure that application is a continuous process.
- (v) Water (below 5°C) should be used for mixing the grout prior to placement .

Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Conbextra Cable Grout

Estimating

Supply

Conbextra Cable Grout : 25 kg bags

Yield

Conbextra Cable Grout : 16.5 litres / 25 kg bag
(approx)

Allowance should be made for wastage when estimating quantities required

Storage

Conbextra Cable Grout has a shelf life of 6 months if kept in a dry store in sealed bags. If stored in high temperature and high humidity locations the shelf life will be reduced.

Precautions

Health and safety

Conbextra Cable Grout is alkaline and should not come into contact with skin and eyes. Avoid inhalation of dust during mixing. Gloves, goggles and dust mask should be worn. If contact with skin occurs, wash with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

Fire

Conbextra Cable Grout is non-flammable.

Additional Information

Fosroc manufactures a wide range of complementary products which include :

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialised flooring materials

Fosroc additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fosroc's 'Systematic Approach' to concrete repair features the following :

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fosroc office - as below.

Conbextra Cable Grout

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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