Conbextra Cable Grout

constructive solutions

Single component highly fluid shrinkage-compensated grout certified by CARES for grouting cables of post-tensioned concrete

Uses

- Grouting of post tensioned cable ducts
- Grouting of pre-stressed cable ducts
- Inflating of flat jacks
- Filling of small cracks, voids and fine fissures
- Consolidation of voided concrete or strata

Advantages

- Highly fluid and pumpable
- All fines formulation for easily penetrating between tendons to minimise voids
- High resistance to bleed, bubbling and separation
- Plastic shrinkage compensated
- High early and late compressive strength
- CARES approved.
- One component, pre-bagged to overcome site-batched variations
- Only containing chloride-free admixtures
- Highly alkaline, providing protection to steel cables and reinforcement.

Description

Conbextra Cable Grout is a ready-to-use blend of Portland cement and chemical additives, requiring only the site addition of clean water to produce a stable and consistent grout mix. The mixed material provides a high flow and low viscosity consistency, suitable for pumping and enabling to penetrate into confined spaces with restricted access. The product is plastic shrinkage-compensated and bleed-resistant.

Standards compliance / certificate

Conbextra CABLE GROUT complies with EN 445, EN446, EN447, EN196-1, EN196-3, and CARES Appendix PT10. The product was certified by CARES (certificate number:).

Application instructions

Preparation

Substrates must be properly prepared prior to grouting, its surfaces should be clean, free from dusts, oil, grease, ice, loose/friable materials, etc., and need to be saturated with fresh water Immediately before grouting. Residual surface water should be removed.

All cable ducts must be clean internally. Those ducts formed without sheaths should be saturated with water and surplus water removed with compressed air prior to grouting. Cable anchorages must be sealed before grouting.

Mixing and placing - Application

Mixing
Care should be taken to ensure that Conbextra Cable Grout is thoroughly mixed. 50Kg or less of Conbextra Cable Grout can be mixed using a Conbextra Mixing Paddle (MR3) with a slow speed (400/500 rpm) heavy-duty drill. Larger quantities require a high shear vane mixer. To enable the grouting operation to be carried out continuously, it is essential that sufficient mixing capacity and labour are available. Use of a grout holding tank with provision to gently agitate the grout may be required. Where ambient temperatures exceed 30°C, use chilled water for mixing.

Prior to the first mixing the vessel should be wetted and drained. The content of water (7 litres per 20 Kg, W/P=0.35) should be accurately measured into the mixer. Slowly add the total quantities of Conbextra Cable Grout, mix continuously for 10 minutes, ensuring that a smooth, even consistency is obtained.

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Properties

The below test results were obtained at water:powder ratio of 0.35 and at temperature of 20°C.

Test Methods	Standard	EN 447:2007 Requirement	Test result
Marsh cone	EN 445:2007	Initial: ≤ 25” @ 30 minutes: ≤ 25”	Initial: 13.8” @ 30 minutes: 15.1”
Spread	EN 445:2007	Initial: ≥ 140 mm @ 30 minutes: ≥ 140 mm	Initial: 165 mm @ 30 minutes: 160 mm
Plastic volumetric variation (Wick induced test)	EN 445:2007	-1% ≤ V% ≤ 5% at 24 hours	0 % @ 24 hours
Bleed (Wick induced test)	EN 445:2007;	≤ 0.3% at 3 hours	0 % @ 3 hours
Setting time	EN 196-3	Initial: ≥ 3 hours Final: ≤ 24 hours	≥ 8 hours ≤ 22 hours
Fresh wet density	EN 445		2.04 g/cm3
Compressive strength: @ 1 day: @ 7 days: @28 days	EN 12190:1999	≥ 40 MPa	 23.5 MPa 70.1 MPa 78.4 MPa
Fire rating	EN 13501-1		Class A1, non-flammable

Clarification of property values: The typical properties given above are derived from laboratory testing. Results derived from field applied samples may vary.

Placing

Conbextra Cable Grout should be placed within 20 minutes after it is mixed. For pumping the grout, a heavy duty diaphragm pump is recommended. Screw feed and piston pumps may also be suitable. The grout should be pumped to a single point to eliminate any air entrapment.

Curing

Any exposed areas of Conbextra Cable Grout should be thoroughly cured with Concure WB curing membrane, continuous application of water or wet hessian.

Cleaning

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

Estimating

Supply

Conbextra Cable Grout: 20 Kg bag

Yield

Approx. 10 litres per 20 Kg bag mixed with 7 litres of water.

Note: Allowance should be made for wastage when estimating quantities required.

Limitations

The Grouting of post tensioned or pre-stressed cables should be undertaken by suitably qualified and experienced applicators.

Conbextra Cable Grout should not be used when the temperature is below 5°C or above 35ºC. It should not be exposed to moving water prior to initial setting.

If any doubts arise concerning temperature or substrate conditions, consult the local Fosroc office.

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