

Conbextra BB92

Conbextra BB92 is an ultra-high performance grout specifically designed for structural grouted connections for wind turbine foundations and oil and gas installations


Uses

- Structural grouted connections for onshore wind turbine foundations and non-structural offshore foundation connections.
- Segmental concrete wind towers

Advantages

- Non-shrink
- High flexural strength and modulus of elasticity without the addition of fibres, enhancing the flow characteristics of the grout.
- Quick return to service and removal of temporary supports due to high early strength build-up, even at low temperatures.
- High fatigue resistance
- Suitable for pumping or pouring over a large range of applications.
- No segregation or bleeding to ensure consistent final physical performance and to prevent pump blockages.

Standards compliance

 2404	<p>FOSROC İDEA YAPI KİMYASALLARI SAN. VE TİC. A.Ş.</p> <p>Demirciler Organize Sanayi Bölğ. Mah. Haldun Aksoy Cad. No:12/1 Gebkim OSB Dilovası/Kocaeli 20</p>
	2404-CPR-TH1013
<p>TS EN 1504-3 R4 Class Structural Repair Mortar (PCC)</p>	
DOP number	TR1504-3/005
Compressive strength	≥ 90 N/mm ²
Chloride ion content	≤ % 0,05
Adhesion	≥ 2.0 N/mm ²
Restricted shrinkage	≥ 2.0 N/mm ²
Modulus of elasticity	≥ 40.0 GPa
Capillary water absorption	≤ 0.5 kg/m ² h ^{0.5}
Reaction to fire	Class A1
Dangerous substances	Complies with 5.4

Properties

The following properties were obtained at a temperature of 20°C, unless otherwise stated:

Typical properties (0,110 w/p ratio)	
Final set	
EN196-3:1996	<5 hours
Static Modulus of Elasticity	
EN 13412	> 41 GPa
Flexural Strength (EN 196-1:2005)	
1 day	> 7,5 N/mm ²
7 days	> 13 N/mm ²
28 days	> 15 N/mm ²
Slump flow	
EN 12350-8	> 700 mm
Flow trough	
EN 13395-2	> 450 mm
Expansion:	
	% 0-1
Initial Flow ASTM C230	
	240 – 280 mm
Fresh mix density	
	2,30 – 2,40 kg/dm ³

Low Temperature Results (EN196-1:2005)			
Age	Test	2°C	5°C
1 day	Compressive	> 5 N/mm ²	> 13N/mm ²
	Flexural	> 1 N/mm ²	> 3 N/mm ²
3 days	Compressive	> 60N/mm ²	> 70N/mm ²
	Flexural	> 10N/mm ²	> 11 N/mm ²
7 days	Compressive	> 70N/mm ²	> 80N/mm ²
	Flexural	> 13N/mm ²	> 13N/mm ²

Compressive Strength 20 °C (EN 12190) (75mm cubes- EN12390-3)		
	Pumpable 0.10 w/p ratio	Flowable - 0.110 w/p ratio
1 day	> 80 N/mm ²	> 60 N/mm ²
7 days	> 90 N/mm ²	> 80 N/mm ²
28 days	> 100 N/mm ²	> 90 N/mm ²

Granulometry	5 mm
Water/powder ratio	0,10-0.110(2.5-3.0 lt/25kg)
Gap depth	10-150* mm
* For larger gap depths contact Fosroc Technical Dept	

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Application Instructions

Preparation

Foundation surface

The substrate surface must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes or fixing pockets must be blown clean of any dirt or debris.

Pre-soaking

Several hours prior to grouting onshore, the area of cleaned foundation should be flooded with fresh water. Immediately before grouting takes place, any free water should be removed. Pay special attention to the bolt holes or fixing pockets.

Formwork

The formwork should be constructed to be leakproof, as Conbextra BB92 is a free flowing grout. This can be achieved by sealing all joints very well.

In some cases it is practical to use a mortar formwork. The formwork should include outlets for the presoaking water when used onshore.

Mixing

For best results a mechanically powered grout mix should be used. For quantities up to 50kg a slow speed drill fitted with a high shear paddle is suitable. Larger quantities will require a high shear vane mixer.

Place the required quantity of clean water (2.5-3.0 litres per 25kg pail, 100-110 litres per 1 tonne bulk bag) into the mixing vessel for each bag to be used. Add the contents slowly to the mixer. Mix continuously for 5 minutes, ensuring a smooth, even consistency is obtained. Note that during the first 2 or 3 minutes consistency will appear drier.

Placing

Conbextra BB92 can be placed in thicknesses up to 150 mm* in a single pour. Any bolt pockets must be grouted with mortar or resin prior to grouting between the substrate and the base plate. Continuous grout flow is essential.

Sufficient grout must be available prior to starting and the time taken to pour a batch must be regulated to the time taken to prepare the next one. The mixed grout should be poured only from one side of the void to eliminate the entrapment of air or surplus pre-soaking water. The grout head must be maintained at all times so that a continuous grout front is achieved.

For large volumes Conbextra BB92 can be pumped.

Curing

On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of Concure curing membrane, continuous application of water and/or wet hessian.

Cleaning

Conbextra BB92 should be removed from tools and equipment with clean water immediately after use.

Cured material can be removed mechanically, or with Fosroc Acid Etch.

Packaging	
Conbextra BB92	25 kg bag
	1000 kg bulk bag
Consumption	
25 kg bag	12 Litres
1000 kg bulk bag	475 Litres

Storage

Conbextra BB92 has a shelf life of 12 months if kept in a dry temperature and high humidity locations the shelf life may be reduced.

Limitations

Conbextra BB92 should not be used at temperatures below +5°C or above 40°C. The substrate must be free of ice. When the air or contact surface temperatures are 5°C or below, it is recommended to use hot water (30-40°C) to accelerate strength development.

At temperatures higher than 35 °C the mixed grout should be stored in the shade. Cool water (below 20 °C) should be used for mixing the grout.

It should not be exposed to moving water or rainfall during constructive application and prior to the final set.

Precautions

Health and safety

Conbextra BB92 is alkaline and should not come in 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. Do not induce vomiting.

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Fire

Conbextra BB92 is not flammable.

For further information, please refer to the Safety Data Sheet of the product.

Additional Information

Fosroc manufactures a wide range of complementary Products which include :

- waterproofing membranes & water stops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialized 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.

** Denotes the trademark of Fosroc International Limited*

† See separate data sheet



Important Note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Service. All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the latest version.

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