

Conbextra EP300

Low exotherm, epoxy resin free flow grout

Uses

Suitable for use where heavy, dynamic or mobile loads are encountered. Particularly well suited to applications where long working time and/or low exotherm properties are required

- Grouting under reciprocating or rotating equipment
- Heavy crane/transporter rails
- High speed turbines and centrifuges
- Grouting over long distances or in thick sections
- All applications under conditions of high ambient temperature

Advantages

- Low creep characteristics under sustained loading.
- Resistant to repetitive dynamic loads.
- Non-shrink and hence ensures complete surface contact and bond.
- High compressive, tensile and flexural strengths.
- Withstands a wide range of chemicals.

Description

Conbextra EP300 is a low exotherm material which is particularly suitable where long working time is needed; for large gaps (up to 300 mm) or for grouting at high ambient temperatures (up to 55°C).

Conbextra EP300 is a three component system consisting of base resin, liquid hardener and specially graded inert fillers.

Technical support

Fosroc offers a comprehensive range of high performance, high quality construction products all backed by BS 5750 certification. Fosroc offers a technical support package to specifiers and contractors as well as technical advice from staff with unrivalled experience in the industry.

Properties

	40°C	50°C
Compressive strength(N/mm²)		
ASTM C579		
3 days	75	-
7 days	100	110
Tensile strength (N/mm²)		
BS6319 Part 7: 1983 :		
7 days	11	12.5
Flexural strength (N/mm²)		
BS 6319 Part 3: 1983:		
7 days	30	30
Mixed Density :	1.95 gm/cc	
Pot life:	50 min at 40°C	
	90 min at 30°C	
	240 min at 20°C	
Chemical resistance :	Oil, grease, fats, most chemicals, mild acids and alkalis, fresh and sea water.	

Note: Consult the local Fosroc Office when exposure to solvents or concentrated chemicals is anticipated.

Note: The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing of field-applied samples may vary, depending on actual site conditions.

Specification

Supplier specification

All epoxy resin grouting where shown on the contract documents, shall be carried out using Conbextra EP300 manufactured by Fosroc and used in accordance with the manufacturer's current data sheet.

Performance specification

All epoxy resin grouting where shown on the contract documents must be carried out with a factory packed product. The hardened grout @ 27°C must have strengths exceeding:

Compressive strength :	80 N/mm ² at 7 days
Tensile strength :	10 N/mm ² at 7 days
Flexural strength :	27 N/mm ² at 7 days

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

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Preparation

Underplate grouting

The unrestrained surface area of the grout must be kept to a minimum. Generally, the gap between the perimeter formwork and the plate edge should not exceed 75 mm on the pouring side and 25 mm on the opposite side. Formwork on the flank sides should be kept tight to the plate edge. Air pressure relief holes should be provided to allow venting of any isolated high spots.

Formwork

The formwork should be constructed to be leak proof as Conbextra EP300 is a free flow grout. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints. Loss of grout once the material is placed, but not hardened, will result in incomplete filling of the gap.

For free flow grout conditions, it is essential to provide a hydrostatic head of grout. To achieve this a feeding hopper should be used - please consult your local Fosroc office for more details.

Typical on-plate shutter system

Removable hopper: for larger pours the grout may be hand placed or pumped into a removable hopper (trough)

Foundation surface

This 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.

Base plate

If delay is likely before placing steel base plates, it is recommended that the underside and edges are coated with Nitoprime 25* to prevent rust formation and ensure bonding with the Conbextra EP300 grout. All metal surfaces should be cleaned to a bright finish in accordance with Swedish Standard SA 2½ or equal. Nitoprime 25 can be applied directly onto newly cleaned steel surfaces even if they are damp.

Mixing

Pour all the contents of the hardener pack into the base container. Mix using a slow speed power mixer until homogeneous.

Pour all the resultant liquid into a container with a capacity of 20 - 25 litres. Add all the filler provided and mix using a slow speed power mixer for two minutes or until a uniform colour is achieved in the grout.

Placing

The mixed grout should be poured steadily from one side only to eliminate the entrapment of air.

Continuous grout flow is essential.

Sufficient grout must be available prior to starting.

The time taken to pour a batch should be regulated to the time taken to prepare the next batch.

Flow characteristics

The maximum distance of flow is governed by the gap thickness, the head of grout applied and the ambient temperature.

Cleaning

All tools and equipment should be cleaned immediately after use with Nitoflor Sol*. Spillages should be absorbed with sand or sawdust and disposed in accordance with local regulations.

Low temperature working

Whilst the performance of Conbextra EP300 at low temperatures is assured, application under such conditions can sometimes be difficult. It is therefore suggested that, for temperatures below 25°C, the following guidelines are adopted:

- (i) Store unmixed materials in a warm (preferably temperature controlled) environment.
- (ii) Keep mixing and placing equipment warm, arranging protection if necessary. It is especially important to keep warm those surfaces of the equipment which will come into direct contact with the material itself.
- (iii) Try to eliminate application in the coldest time of the day, and certainly avoid application at night.
- (iv) Minimum temperature of the mixed material to be 25°C, and loading shall only be allowed 72 hours after pouring.

Limitations

- Grouts should not be placed in any unrestrained situation, i.e. base plate plinths, etc. Failure to comply may lead to crack development in the grout.
- At temperatures below 25°C the cure rate may be slow, but will go to completion provided the temperature remains above 5°C.
- The cured grout, which is resistant to frost and sub-zero temperatures, is most suited for ambient temperatures in the range of 25° to 55°C.



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Estimating

Supply

Conbextra EP300	:	14 Litre packs
Nitoflor Sol	:	5 & 20 Litre tins
Nitoprime 25	:	1 & 4 Litre packs

Coverage

Nitoprime 25	:	5.5 - 6.5 m ² per Litre
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Storage

All Conbextra EP300 has a shelf life of 12 months if kept in dry conditions at 20°C. If stored at high temperatures the shelf life will be reduced.

Precautions

Health and safety

Conbextra EP300 contains resins which may cause sensitisation by skin contact. Avoid contact with skin and eyes and inhalation of vapour. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream, followed by soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - **do not** induce vomiting.

Fire

Nitoflor Sol is flammable. Keep away from sources of Ignition. No smoking. In the event of fire extinguish with CO₂ or foam. Do not use a water jet.

Flash points

Nitoflor Sol	:	33°C
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For additional information see relevant Material Safety Data Sheet.

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.

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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.



MATT INDIA CO

G-25, SECTOR -63,
GAUTAM BUDDH NAGAR,
UP-201307 INDIA

Phone No:

09555666476

09555655544

Email:mattindia1@gmail.com