

## High strength, epoxy resin grout

### Uses

Provides a free flowing grout, for use where physical properties and chemical resistance of the hardened grout are of utmost importance. It is suitable for a wide range of heavy duty applications including :

- Underplate grouting to substantial structural elements.
- Base plate grouting in dynamic load situations such as turbines and other reciprocating machinery.
- Heavy industrial applications in steelworks, refineries chemical plants and electroplating works.
- Structural infill where very high strength is required.
- Rail track applications, to support heavy cranes, or on transporter rails.

### Advantages

- Excellent durability - high compressive, flexural and tensile strengths ensure a long working life.
- Cost effective - high early strength gain promotes minimum downtime and early commissioning of plant.
- User friendly - simple, full pack mixing to ensure that the performance characteristics are achieved.
- Versatile - suitable for a wide range of loading situations including repetitive dynamic loads.
- Excellent in service performance - non-shrink capability ensures full surface to surface contact.

### Description

Conbextra EP10 is a solvent free epoxy resin grout designed for grouting of gap widths of 0.25 to 10mm. It is an all liquid system consisting of base and hardener. The components are supplied in the correct mix proportions designed for whole pack mixing on site.

### Specification

Where shown on the contract documents, the epoxy grout shall be Conbextra EP10 supplied by Fosroc. It shall provide good general chemical resistance, and a 7 day compressive strength of at least 80 N/mm<sup>2</sup>.

### Properties

Parameter	Value	Unit	Remarks
Pot Life @ 27°C	50	mnts	
Density	1050	kg/m <sup>3</sup>	
As per BS 6319			
Tensile Strength @ 7 Days	20	MPa	BS 6319 Pt 7
Flexural Strength @ 7 Days	40	MPa	BS 6319 Pt 3
Compressive Strength @ 7 Days	80	MPa	BS 6319 Pt 2
As per ASTM C881			
Compressive Strength @ 7 Days	>70	MPa	ASTM D695
Tensile Strength @ 7 Days	>35	MPa	ASTM D638
Bond Strength @ 7 Days	>10	MPa	ASTM C882

### Instructions for use

#### 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 EP10 is a free flow grout. This can be achieved by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints.

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.

#### Foundation surface

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

# Conbextra EP10

## 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 EP10 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

The entire contents of the hardener can should be poured into the base container and mixed for 2-3 minutes or until uniform colour is achieved. Once mixed, the material must be used within the specified pot life (see under Properties). After this time, unused material will have stiffened and should be discarded.

**Note:** Immediately prior to placement, all surfaces must be dry.

## Placing

Ensure that the grout can be placed within its pot life. 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. Pouring should be from one side of the void to eliminate air entrapment. The hydrostatic head must be maintained at all times so that a continuous grout front is achieved.

## Cleaning

All tools and equipment should be cleaned immediately after use with Nitoflor Sol\*.

## Hot weather working

Whilst the performance of Conbextra EP10 at elevated temperatures is assured, application under such conditions can sometimes be difficult. It is therefore suggested that, for temperatures above 35°C, the following guidelines are used:

- (i) Store unmixed materials in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- (ii) Keep mixing and placing 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 in the middle of the day, and certainly avoid application in direct sunlight.

- (iv) Ensure that there are sufficient operatives available to complete application within the material's pot life.

## 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.

## Estimating

### Supply

Conbextra EP10	:	1 litre and 20kg pack
Nitoprime 25	:	1 and 4 litre packs
Nitoflor Sol	:	5 & 10 litre tins

### Coverage

Nitoprime 25	:	5.0 to 6.5 m <sup>2</sup> /litre
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## Storage

When stored in warehouse conditions below 35°C, Conbextra EP10 will have a shelf life of 12 months.

## Precautions

### Health and safety

Some people are sensitive to epoxy resin so gloves and a barrier cream. Work or similar should be used when handling these products. If contact with the resin occurs, it must be removed before it hardens with a resin removing cream. Follow by washing with soap and water. **Do not** use solvent. The use of goggles is recommended but should accidental eye contamination occur, wash thoroughly with plenty of clean water and seek medical treatment immediately.

### Fire

Nitoprime 25 and Nitoflor Sol are flammable.

### Flash points

Nitoprime 25	:	39°C
Nitoflor Sol	:	33°C

# Conbextra EP10

## 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.



## Fosroc Chemicals (India) Pvt. Ltd.

### Head Office

Embassy Point, No. 150,  
2nd Floor, Infantry Road,  
Bangalore 560 001,  
Karnataka

### 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.

### telephone

+91 80-42521900

### fax

+91 80-22281510

### e-mail

enquiry.india@fosroc.com

### Regional Offices

#### Chennai

Hills Centre, Old No. 5,  
New No 9, 3rd Cross Street,  
Jeth Nagar, Raja Annamalaipuram,  
Chennai 600 028.  
Ph: 9500064795

#### Mumbai

MBC Park, 12th floor, Office No.12B,  
'D' Block, Near G Corp/Hyper City  
Kasarwadawali, Ghodbunder Road,  
Thane (West) 400 615  
Ph: +91 22 6229 6800

#### Noida

Unit No. 601, Highway Tower-II  
A-13/2, 6th Floor, Sector- 62  
Gautam Buddha Nagar,  
Noida 201 309, Uttar Pradesh  
Ph: +91 120 6121900  
Fax: 0120-4270622

#### Kolkata

304, Jodhpur Park  
Kolkata 700 068  
Ph: +91 33-65343188  
Fax: 033-2499-0278