



## Non-shrink free flow ultra high strength grout

### Uses

For heavy duty support beneath load bearing units especially where high static and dynamic forces occur. Also as an efficient medium for transferring all operational loads to the foundation. For effective grouting of base plates and bolt pockets of Turbo Generators, Diesel Generating Sets, Crane and Transporter Rails even with high wheel loadings, Heavy Reciprocating equipments, compressors, pump sets, pulverising mills, metal shearing and processing machines, steel rolling mill beds, cement, textile, granite and paper plant machinery.

### Advantages

- **Non shrink** - Will continue to occupy the filled spaced without shrinkage.
- **High strength** - Can be used under heavy duty machines and equipment with high operational and static loads.
- **Free flow** - Ensures high level of contact with load bearing areas. Also helps complete filling without voids. No need for external aids like rodding, poking, chaining etc.
- **Prepacked and factory controlled** : Consistency and reliability ensured. Site batching and blending variations eliminated.
- **Chloride free** : Does not cause corrosion of machine parts, anchor bolts etc., in contact with grout.
- **Hydrogen free** : Non metallic expansion system.

### Description

Conbextra UHS is supplied as a ready-to-use dry powder, requiring only the addition of water to produce a free flowing non-shrink grout. The material is a blend of specially processed cement, pre-graded fillers and additives which impart.

- High early and final strengths due to very low water requirement.
- Controlled expansion to retain the original volume filled even after setting.
- Free flow characteristics without any segregation and bleeding.

Conbextra UHS, on setting, will have a micro-cellular structure with high frost, fire and oil resistance.

### Properties

Compressive strength ( N/mm<sup>2</sup>) As per IS 4031 Part 6.

	1 day	3days	7 days	28 days
Flowable (W/P 0.14)	35	60	70	90

**Note** : Cubes cast are kept under restraint before testing, to simulate site condition. Size of the cubes used 70.6mm x 70.6mm x 70.6mm tested at 30°C.

**Tensile strength** : At 28 days tensile strength achieved is typically 45kg/cm<sup>2</sup>.

**Flexural strength**: 120 kg/cm<sup>2</sup> ( BS 4551, 1980 )

**Young's modulus** : 28 kN/mm<sup>2</sup>

**Expansion characteristics** : Controlled expansion occurs in the unset material to ensure that the grout, when cured, will continue to occupy its original volume within the confines of the voids in which it was placed.

**Unrestrained expansion** : 1- 4 %

**Time for expansion** : Expansion starts 20 mins. after mixing and will be complete 150 mins. later.

**Pressure to restrain plastic expansion** : Appr. 0.004 N/mm<sup>2</sup>.

**Note** : It is necessary to restrain free grout edges over 50mm wide. Otherwise unrestrained expansion may lead to some cracks.

**Fresh wet density** : At flowable consistency : 2250 - 2350 kg/ m<sup>3</sup>

**W/P ratio** : Recommended water powder ratio for flowable consistency is 0.14. Total quantity of water required for 25 kg bag is 3.5 litres.

**Flow characteristics** : The maximum distance of flow is governed by the gap width and the head of the grout.

Typical data for flow design, assuming grout is poured immediately after mixing, is given in the table below :

Grout consistency	(mm)	Max. flow distance in mm		
		Gap width		
		50mm head	100mm head	250mm head
Flowable	30	200	1000	2000
	40	500	1500	2500
	50	1000	2000	3000

# Conbextra® UHS

N.B : This table is based on the following factors.  
Temperature - 30°C; Water saturated substrate; Minimum unrestricted flow width : 30mm.

## Application guidelines

A few DO's and DON'Ts

### DO

- Measure water precisely
- Mix mechanically
- Use mixed grout within 30 minutes
- Clean concrete and steel surfaces thoroughly before grouting
- Build a strong, carefully designed leakproof shuttering
- Start curing when grout reaches 'touch-hard' state
- Cure properly for atleast 7 days

### DON'T

- Mix cement, sand, fibres, admixtures, etc., with Conbextra UHS.
- Mix water more than specified
- Pour grout from two sides while grouting base plates
- Pour grout from a height
- Use vibrators in grout
- Use damaged bags of Conbextra UHS

Detailed application procedure will be supplied separately prior to usage.

## Estimating

### Packaging

Conbextra UHS is supplied in double lined HDPE bags in 25 kg weight.

### Yield

One bag of Conbextra UHS will yield 12 litres at flowable consistency.

### Shelf life

6 months when stored under cool dry conditions.

## Precautions

### Health & Safety

Conbextra UHS is non-toxic, but alkaline in nature. Gloves should be worn while handling this product. Splashes on grout on the skin or eyes should be washed off with clean running water. In the event of prolonged irritation, seek medical advice.

## Additional information

In addition, Fosroc manufactures a range of products which includes admixtures, curing compounds, flooring products, repair and protection systems, sealants and waterproofing products.

Separate datasheets are available on these products.

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### Important note :

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