

## Polymer modified, cement based, floor levelling compound - 4mm to 12mm

### Uses

Cemtop HD is a levelling product which provides a rapid setting trafficable cementitious floor for new and reinstatement applications. When overcoated is suitable for areas subject to chemical or hydrocarbon attack. Typical applications would include:

- Forklift trafficked floors
- Light industrial floors
- Car parks
- Walkways and pavements
- High bay warehousing floors
- Garage and workshops
- Underlayment for vinyl sheet, tiles, carpets etc

### Advantages

- Rapid curing - accepts foot traffic, thus encouraging speedy progress of subsequent works
- Simple installation - 'pour and spread' technique allows large areas of floor to be covered very quickly.
- Highly durable - produces a hard wearing surface, with exceptionally good impact resistance.
- Versatile - can be applied in thicknesses of 4 mm to 12 mm, using a pump or by hand.
- Consistent performance - single pack eliminates need for site batched screeds, can be applied directly to concrete.
- Specially formulated for use in Middle East conditions

### Description

Cemtop HD is a blend of selected cements, graded aggregates, polymers and flow agents. It is supplied as a dry, grey powder which requires only the addition of water to produce a self smoothing, free flowing material.

Cemtop HD may be applied either by hand, or via the use of a continuous mixer pump.

### Specification

The cementitious floor underlay shall be Cemtop HD by Fosroc. At 28 days the material should achieve a compressive strength of not less than 35 N/mm<sup>2</sup>. The floor shall be prepared and the product mixed and applied in accordance with the manufacturer's current data sheet.

### Properties

The test results below were determined on laboratory specimens and may vary from those obtained under site conditions.

W/P ratio	: 0.21
Compressive strength (EN 13892-2, 40 x 40 x 160mm prism)	: 35 N/mm <sup>2</sup> at 28 days
Flexural strength (EN 13892-2, 40x40x160mm Prisms)	: 5Mpa
Abrasion Resistance (EN 1504-2, Wheel CS17, 1000cycles, 1000g Load)	: < 3g weight loss
Pull out strength (EN 1542)	: > 1Mpa
Minimum thickness	: 4mm
Maximum thickness	: 12mm
Time to foot traffic at 35°C	: 16 hours
Time to overlaying at 35°C	: Please consult Fosroc office

### Design criteria

- Cemtop HD can be applied to both concrete substrates and sound, sand:cement screeds.
- The relative humidity of the substrate should not exceed 80% at the time of application.
- When installed, the product will follow the existing floor gradient.
- New concrete floors should be at least 21 days old, prior to application of Cemtop HD.
- The substrate onto which the Cemtop HD is to be applied must be generally clean, sound and free from oil, grease and other contaminants

### Instructions for use

#### New concrete floors

These should normally have been placed for at least 21 days and have a moisture content of less than 5%. Floors should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Excessive laitence can be removed by light mechanical scabbling, grinding or grit blasting. Light laitence can be removed by grinding or blasting and then by vacuum cleaning.

#### Old concrete floors

Where deep seated contamination has occurred, mechanical methods such as blasting, grinding or scabbling should be used to provide a suitable clean surface. Any necessary repairs should be carried out using Renderoc Range of Products.

# Fosroc Cemtop HD

---

## Priming

The objective of priming the substrate is to “seal” it, and thereby prevent release of air from the substrate, which would cause bubbles or pinholes in the surface of the Cemtop HD. Additionally it aids adhesion between the two surfaces.

The substrate must be primed with Nitoprime 33

Two coats of primer are required. For the first coat, add 1 part Nitoprime 33 to 5 parts clean water. The diluted primer should be brushed into the floor with broom. Spray or roller application is not recommended as insufficient primer will be applied.

When the first coat of primer is touch dry, a second coat should be applied. Add 1 part Nitoprime 33 to 3 parts clean water and apply to the substrate in a similar manner. For highly porous substrates, a third coat of the 1:3 diluted primer may be necessary.

Ponding of the primer must be avoided as this can lead to failure at the bond line.

## Installation by hand

### Mixing

Only full bag mixing is permissible. Do not part mix, or add further water to the mixed material in order to prolong workability. Either of these actions will result in an incorrect water:powder ratio, and will compromise the final material performance.

It is essential that Cemtop HD is thoroughly mixed and that the temperature of the mixed material should not be allowed to exceed 30°C.

Measure out 4.2 litres of cool, potable water, into a suitably sized mixing vessel and mixing a full bag of Cemtop HD. It is suggested that the temperature of the water should not exceed 20°C so that the temperature of the final mixed mortar is not greater than 30°C.

Always add the powder to the water. Mix for 3 to 5 minutes until fully homogenous, using a 1 KW, slow speed drill (400 to 500 rpm) + Fosroc MR3 mixing paddle attachment.

## Application

Pour the mixed material on to the dry, primed surface, spread with a trowel and allow to ‘self-level’. Roll the surface with a spiked roller to promote the release of any trapped air.

Best results are achieved when the pouring and levelling is a continuous process.

There can be minor shade variation in Cemtop HD surface when not coated with resin coatings.

## Installation by pump

This is a highly specialised activity and requires the use of an approved applicator, who has been fully trained in the use of product and equipment by Fosroc.

## Expansion joints

Expansion joints in the existing substrate must be retained and continued through the Cemtop HD. Fosroc have a range of joint sealants specifically designed for flooring, consult your local Fosroc office for more details.

## Cleaning

Tools and equipment should be cleaned immediately by flushing with water. Cured material can only be removed by mechanical means.

## Hot weather working

It is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:

- (i) Store unmixed materials in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- (ii) Keep 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 avoid application during the hottest times of the day.
- (iv) Make sufficient material, plant and labour available to ensure that application is a continuous process.
- (v) Use ice cold water for mixing.
- (iv) Pre-soak the surface prior to application of primer

## Curing

Curing is highly essential. Freshly hardened surface should be covered completely with polythene sheet for 3 days.

## Coating

In areas that are subject to regular water immersion or chemical attack from acids or organic solvent, it will be appropriate to protect Cemtop HD with an epoxy floor coating such as Nitoflor FC130 or Nitoflor FC140.



# Fosroc Cemtop HD

## Limitations

- Concrete slabs onto which Cemtop HD is to be applied must have a surface temperature of at least 5°C, with the air temperature maintained at 10°C, or more, during application.
- Protect Cemtop HD from freezing for 48 hours after placement.
- For temperatures above 35°C refer to Hot Weather Working.
- Only suitable for use out of direct sunlight and on internal floors.

## Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

## Estimating

### Supply

Cemtop HD	:	20 kg bags
Nitoprime 33	:	1 and 5 litre containers

### Coverage

Cemtop HD	:	12 litres per 20 kg bag
Nitoprime 33	:	10m <sup>2</sup> /litre per coat 5m <sup>2</sup> /litre per 2 coats

**Note:** Coverage figures given are theoretical - due to wastage factors and the variety and nature of substrates, practical coverage figures may be reduced, this will vary with site and application conditions.

## Storage

### Shelf life

Cemtop HD has a shelf life of 6 months when stored in warehouse conditions below 20°C in the original, unopened packs.

## Storage conditions

Store under warehouse conditions, below 20°C in the original, unopened packs

## Precautions

### Health and safety

Cemtop HD contains certain powders which, when mixed with water or become damp, release alkalis which can be harmful to the skin. During use, avoid inhalation of the dust and contact with the skin or eyes. Wear suitable protective clothing - eye protection gloves and respiratory equipment (particularly in confined spaces).

The use of barrier creams to provide additional skin protection is also advised. In case of contact with the skin, rinse with plenty of clean water, then cleanse thoroughly with soap and water. 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

Cemtop HD is non-flammable.

For further information, please refer to the respective Product 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 Cemtop HD

---

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.

## 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.



## Berger Fosroc Limited

Corporate Address:

'Berger House', House # 08, Road # 02, Sector # 03, Uttara Model Town, Dhaka 1230, Bangladesh.

telephone( Hunting) : +880248953665, fax : +880248951350,

e-mail : enquiry.bangladesh@bergerfosroc.com, website : www.bergerfosroc.com

