



constructive solutions

Cemtop HD*

Polymer modified, cement based, floor leveling compound, 4 – 12 mm

Uses

Cemtop HD is a leveling 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 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.

Specification

The cementitious floor underlay shall be Cemtop HD by Fosroc. At 28 days material should achieve a compressive strength of not less than 35 N/mm² and an ‘A’ rating for the BRE (BS 8204) test for Impact Resistance. The floor shall be prepared and the product mixed and applied in accordance with the manufacturer's current data sheet.

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.

Properties

The following results have been derived under laboratory conditions, and may vary slightly from those achieved on site:

Compressive strength (50 mm cubes) (cured @ 35°C)	: 35 N/mm ² @ 28 days
BRE Impact Resistance (BS 8204, Part 1:1987)	: Class A @ 28 days Highest rating
Minimum thickness	: 4 mm
Maximum thickness	: 12 mm
Time to foot traffic at 35°C	: 16 hours
Time to overlaying at 35°C	: Please consult Fosroc office
Building Regulations 1985 Document B – “Fire”, paragraph A8(b)	: Class O surface
Method of test for fire propagation of products (BS 476, Part 6:1989)	: Propn. Index, I = 0.0
Surface spread of flame test for materials (BS 476, Part 7:1987)	: Class 1 spread of flame

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 laitance can be removed by light mechanical scabbling, grinding or grit blasting. Light laitance can be removed by grinding or blasting and then by vacuum cleaning.

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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 SXtra*†.

Priming

The substrate should be primed in order to prevent air release and to provide a bond for the Cemtop HD. Priming is achieved by coating the floor with a solution of Nitobond PVA diluted 1:1 with potable water. If, after treatment an even sheen is not evident on the floor an additional application of primer should be made.

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 5.2 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 leveling is a continuous process.

Installation by pump

This is a highly specialized 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.

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*†.

The first coat of the epoxy floor coating should be applied within 2 - 6 hours of installation of Cemtop HD and the second coat should be applied after the first coat is dry, typically 12 - 18 hours.

In areas where high chemical resistance is required, the first coat shall be Nitoflor FC130 with the second coat being Nitoflor FC140.

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.

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.



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Hot weather working

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

- a) Store unmixed materials in cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight
- b) 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
- c) Try to avoid application during the hottest times of the day
- d) Make sufficient material, plant and labour available to ensure that application is a continuous process
- e) Use cool water for mixing and also to soak the surface prior to the application of primer

Estimating

Supply

Cemtop HD	:	20 kg bags
Nitobond PVA	:	4 & 20 litre cans

Coverage

Cemtop HD	:	11.8 litres per 20 kg bag
Nitobond PVA	:	10 m ² /litre per coat

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

Cemtop 400SD has a shelf life of 6 months and Nitoprime 33 has a shelf life of 12 months, when stored in warehouse conditions below 20°C in the original, unopened packs.

Store under warehouse conditions, below 35° C in the original, unopened packs.

Precautions

Health and safety

Cemtop 400SD 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.

For further information, please refer to the respective Product Material Safety Data Sheet.

Fire

Cemtop 400SD is non-flammable.



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The Right Chemistry for Construction

Fosroc is one of the world's major manufacturers of advanced technology chemical based products for the construction and refurbishment industries. It operates internationally through a network of operating companies, licensees, distributors and agents.

Having over 70 years experience and using global resources for research and technical development, Fosroc has built a substantial worldwide reputation in manufacturing the most comprehensive range of high performance construction chemicals:

- Concrete admixtures
- Surface treatments
- Grouts and anchors
- Concrete repair
- Industrial flooring
- Protective coatings
- Joint sealants
- Waterproofing
- Adhesives
- F.R.P Structural Strengthening
- Specific building products

* Denotes the trademark of Fosroc International Ltd.

↑ 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.

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