

# Cemtop PS5

## Self-Smoothing Cementitious 5-15mm Flow Applied Polishable Underlay / Overlay

### Description

Cemtop PS5 is a self-smoothing, one component pre-blended dry mix mortar system, comprising of cement, graded high strength aggregates and performance polymers that conforms to technical requirements of EN 13813 standard.

Cemtop PS5 can be applied to a thickness of 5 to 15 mm thickness onto new and old concrete surfaces that are in sound condition.

### Product brief

- Demands of polished concrete look in commercial and residential places is very high but unviable due to limitations of downsizing the system infrastructure and achieving the same result.
- Cemtop PS5 is designed considering these limitations with application process suited to average skillset of installer.
- Polishing system possible with simple burnisher with pads and sealing with Nitoflor Densifier to full scale- 5-7 step polishing dry or wet with resin pads

Cemtop PS5 is fast setting Industrial grade, wear resistant floor screed with aesthetic finishes. Finished surface has inherent gloss and with proper application meet the flatness standard SR1 as per BS.

### Uses

- Commercial, Institutional and Residential buildings for seamless durable finishes.
- Retail stores, B2B stores in shopping malls. It gives the same finish as polished concrete grade slab installation in any greenfield retail or warehouse project.
- Offers great flexibility while working with many stakeholders on a project, as application time is quite short and polishing can be taken up after completion of other civil, interior works.
- Easy to install, requires minimum tools and machines any flooring contractor can be guided to install the floor.
- It is touch dry in 2-3 hours and walkable after 12 hours in well ventilated space. The floor is ready to accept full traffic after 48 hours.
- It is available in various colors. It can be grinded and polished or only polished or buffed and sealed stain resistant sealers.

### Technical properties

Compressive Strength	
7 days	>30 N/mm <sup>2</sup>
28 days	>40 N/mm <sup>2</sup>
Flexural Strength	
28 days	>7 N/mm <sup>2</sup>
Adhesion Strength	
28 days	>2.5 N/mm <sup>2</sup>
Wet Density	2350 Kgs/m <sup>3</sup>
Water:Powder	0.11 - 0.12

**Note:** 1.The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary, depending on actual site conditions.

It is advised to carry out a trial on site for atleast 2 sq.m. to access site conditions before proceeding with the complete project.

### Specification

Floor areas so designed should be covered with Cemtop PS5 manufactured by Fosroc. The product shall achieve a compressive strength of not less than 20 N/mm<sup>2</sup> at 1 day and not less than 40 N/mm<sup>2</sup> at 28 days plus a minimum flexural strength of 8 N/mm<sup>2</sup> at 28 days when tested to Fosroc approved test methods. The floor shall be prepared in line with the manufacturer's current data sheets.

### Storage

Cemtop PS5 is supplied in 20 kg HDPE bags with LDPE lining. It should be stored in unopened bags in clean dry conditions. Storage temperatures should in the range of 5° C to 40° C.

### Mixing Instructions

- Cemtop PS5 should be mixed in forced action pan or drum mixer. For smaller batches drill machine operated paddle mixer with maximum rpm of 900 to be used.
- Always add powder in water. Mixing proportion- 20 Kg powder component to be mixed in 2 to 2.5 lit of potable water. Field test to check flow by mixing and pouring 5 kg mix on any tack free primed surface and diameter of spread should be min 500mm and upto 550 mm.

### Advantages

- High compressive strength at lower thickness
- Can be polished to achieve sheen on the floor
- Can be used in exposed conditions
- Quick turn around time

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## Installation Guide:

### Surface preparation

New concrete floors:

These should normally have been placed for at least 21 days. 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 followed by thorough washing with clean water, vacuum cleaning and allowing the

surface to dry. Light laitance can be removed by grinding or blasting followed by vacuum cleaning to remove dust debris. Light oil and grease staining can be removed with degreasers followed by washing with clean water.

### 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 or Renderoc FC.

### Priming:

The substrate should be thoroughly prepared as detailed above.

The substrate should be pre-soaked with clean water for 4 hours immediately prior to application of Nitoflor Cemprime 1. Before proceeding with the application of Nitoflor Cemprime 1, the surface should be in a saturated surface dry condition, with no free standing water.

The objective of priming the substrate is to 'seal' it, and thereby prevent release of air, rising from the substrate, and thus forming bubbles or pinholes in the surface of the Cemtop PS5.

Additionally it aids adhesion between the two surfaces. The substrate must be primed using Nitoflor Cemprime 1 (without any dilution) and allowed to reach tacky state. The primer should be brushed into the floor by broom. Spray or roller application is not recommended as insufficient material will be applied. When the first coat of the primer is touch dry, a second coat of

Nitoflor Cemprime 1 should be applied to the substrate in the similar manner. For highly porous substrates, a third coat of the primer may be applied with Nitoflor Cemprime 1.

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

Any necessary repairs should be carried out using Renderoc

■ Priming cleaned concrete surface. Preferably on dry surface to moist surface. One or two coats may be necessary based on porosity of the surface. High porosity needs multiple coats. Primer can be diluted with water upto 50% for such pre-coats.

■ Cemtop PS5 - Should be poured over tack free primed surface and spread evenly.

■ Use guides/ side forms of height to match desired FFL (finished floor level) Pour mixed material in between forms, level evenly with Gauge Rake, spread and tool with **Squeegee trowel, Steel smoother to get even finish.**

■ Moist curing for 1-2 days by sprinkling water.

### YEILD:

Cemtop PS5 is supplied in 20kgs. For estimate, 50 kg of Cemtop PS5 yields 0.022 cum of volume.

### Consumption

Thickness(mm)	Cemtop PS5 (kg/sqm) powder
5	11.75
10	23.50
15	35.25

2.35 kgs is needed per m<sup>2</sup> per 1mm thickness. 10mm thick floor will require 23.50 kgs per m<sup>2</sup>.

For thickness exceeding 15mm add 8mm down clean, dry aggregates in 2:1 proportion by weight. 2 parts Cemtop PS5 & 1 part aggregates. Higher abrasion resistant aggregates will give better results.

### JOINTS:

Forming control joints to match control joints of base or forming panels of size not exceeding 50 sqm.

### LIMITATIONS

■ Concrete slabs onto which Cemtop PS5 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.

■ For temperatures above 35°C refer to "Hot Weather working".

■ Prevent freezing of Cemtop PS5 for 48 hours from placement.

■ Cemtop PS5 should not be applied to asphalt substrates.

■ If the substrate onto which Cemtop PS5 is applied moves or cracks, reflective cracking may occur.

■ Only suitable for use out of direct sunlight and/or drying winds during application and initial curing period

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## 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.

## HEALTH AND SAFETY:

Full health and safety information can be supplied on request. The unmixed powder is irritant as is any cement product and direct skin contact should be avoided.

## Storage

### Shelf life

Cemtop PS5 has a shelf life of 6 months and Nitoflor Cemprime 1 has a shelf life of 12 months, when stored in warehouse conditions below 20°C in the original, unopened packs

## Precautions

### Health and safety

Cemtop PS5 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



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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.

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