

Cemtop Micro T

Cement based, trowel applied two component, industrial flooring system - 1mm to 5mm

Description

Cemtop Micro T is a blend of selected cements, hard-wearing graded aggregates modified with polymers and flow agents. It is supplied as two component, pre-weighed, powder and liquid. It is mixed together for a trowel consistency.

Cemtop Micro T may be applied and leveled with hand float/trowel.

Uses

Cemtop Micro T is designed as a thin layer industrial wearing course for use in areas that are subjected to both foot and vehicular traffic. Typical uses are for reinstatement of existing floors or as a final wearing course on new concrete floors where specified floor tolerances have not been achieved. Its texture allows finishing hard and resistant floors with a waxed concrete appearance.

It is suitable for use across a wide range of environments, such as:

- Industrial floor resurfacing, refurbishment
- Residential applications for drawing rooms, kitchen, dining, bathroom flooring.
- Commercial spaces, institutional buildings, airports.

Advantages

- Rapid application/installation - very fast application enables large areas to be installed in a working day.
- Rapid strength gain and curing - allows speedy access and minimises disruption and downtime.
- Economic - more cost effective than equivalent resin based systems.
- Simple installation - eliminates time consuming and labour intensive sand cement screeds.
- Stable - can be installed in large jointless areas.
- Versatile - can be applied as underlay or overlay.
- Consistent performance - pre-weighed and pre-packed eliminates need for site batching and ensures consistency of mixed product.
- It can be finished with hand floats or fresno tool for large areas with minimum skillset. High and lows can be hand grinded to smoother the surface.

Properties

Compressive strength	
7 days	>30 N/mm ²
28 days	>40 N/mm ²
Flexural Strength	
28 days	>7 N/mm ²
Adhesion Strength	
28 days	1.5 N/mm ²
Mixed Density	2350 Kgs/m ³
Polymer : Powder	0.25
Minimum thickness	1mm
Maximum thickness	5 mm
Traffic time @ 20 - 30°C	
Foot traffic	12 hrs
Light traffic	24 hrs
Heavy traffic	7 days

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.

2. Excessive loading should be avoided for 7 days after application. 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 Micro T manufactured by Fosroc. Floor should be structurally sound & suitable for applied load. Floor should be checked for serviceability conditions before application of Cemtop Micro T.

Design criteria

■ Cemtop Micro T is designed for application to concrete substrates and sound sand-cement screeds at a minimum thickness of 1mm to a maximum thickness of 5mm.

■ The substrate should have either a compressive strength of 25 N/mm² or a surface tensile strength in excess of 1.25 N/mm² and a relative humidity not exceeding 75% at the time of installation. The relative humidity must not be greater than 80% if a Nitoflor resin based coating is applied. Cracks and holes should be repaired with recommended Fosroc products.

■ When installed, the product will follow the existing floor gradient. If a floor with a particular slope is required it will be necessary to use levelling equipment to obtain the desired gradient.

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- Substrate should be designed for imposed loads, free of structural defects.
- New concrete floors should be at least 21 days old, prior to application of Cemtop Micro T.
- The substrate onto which the Cemtop Micro T is to be applied must be generally clean, sound and free from oil, grease and other contaminants.

Consult local Fosroc office for suitability of other floor substrates and floor repair products.

Instructions for use

Surface preparation

New concrete floors

Concrete should be minimum 21 days cured, preferably 90 days cured. 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 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 milling, 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 clean, dry, free of defects, sharp highs and lows. Nitoflor Cemprime 1 to be applied by brush, ensuring there is no puddle formed. If the surface is highly absorbent/porous, apply 2nd coat after 1st coat is touch dry.

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 Micro T. Additionally it aids adhesion between the two surfaces.

The substrate must be primed using Nitoflor Cemprime 1 (without any dilution) and allowed to reach tack-free 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.

Installation by hand

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

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

Completely pour out 5 litres of part B into a fresh bucket or suitably sized mixing vessel and mix a full bag of Cemtop Micro T.

Always add the powder to the liquid polymer. Mix for 3 to 5 minutes until fully homogenous, using a 1 KW, slow speed drill (400 to 500 rpm) fitted to a suitable Mixing Paddle (MR3) attachment.

Application

Pour the mixed material, immediately upon completion of mixing, on to the dry, primed surface, spread with a trowel and allow to 'self-level'.

No spike rolling is required. Do not attempt to float finish the setting surface.

The required thickness must be achieved in one application. For best results, the pouring and levelling should be a continuous process.

Note: If the mix stiffens, it should be discarded. Do not attempt to re-mix with water / additional polymer.

Installation by pump

Not recommended.

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Expansion joints

Structural Expansion joints in the existing substrate must be retained and continued through the Cemtop Micro T. Fosroc has 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 / Finishing

In normal conditions, Cemtop Micro T does not require curing, but in harsh climatic conditions of direct sunlight, drying winds etc., freshly hardened surfaces should be covered completely with a polythene sheet for 2 days.

24 hours after the application of the second coat, rub down the surface with an eccentric grinder and 120 grain paper. Grinding offers a softer and silkier effect and increases the effects of texture.

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 Micro T with an epoxy floor coating such as Nitoflor FC130 or Nitoflor FC140.

Maintenance

Where Cemtop Micro T has not been overcoated, it may be cleaned with a proprietary rotary scrubbing machine. It should not be cleaned with strong alkaline based cleaning agents.

If Cemtop Micro T has been overcoated with any of the Nitoflor range of resin floor coatings, contact your local Fosroc office for cleaning procedures

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.

Limitations

- Concrete slabs onto which Cemtop Micro T 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 Micro T for 48 hours from placement.
- Cemtop MicroT should not be applied to asphalt substrates.
- If the substrate onto which Cemtop Micro T 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

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 Micro T (Part A)	: 20 kg bags
Cemtop Micro T(Part B)	: 5 kg can
Nitoflor Cemprime 1	: 5 L containers

Consumption

Cemtop Micro T : 2.35 kg/m²/mm

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.

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Storage

Shelf life

Cemtop MicroT has a shelf life of 6 months and 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 MicroT 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 MicroT is non-flammable.

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

Excessive loading should be avoided for 7 days after application

See separate data sheet



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