

Polymer modified, cement based, floor levelling compounds

Uses

The Cemtop range of products includes the following:

Cemtop XD: A heavy duty, highly abrasion resistant floor surfacing system. Suitable for industrial and commercial buildings, for new construction or refurbishment projects.

Cemtop GP: A general purpose self-levelling underlayment before the application of floor finishes or Cemtop XD. Cemtop GP is also suitable as a floor finish for foot traffic or light commercial areas.

See also 'Uses' table on page 3.

Advantages

- Very fast application, enables large areas of floor to be completed in a working day
- Can be applied directly onto concrete floors, eliminates traditional sand-cement screeds
- Dimensionally stable, can be installed in large areas
- Rapid hardening and curing allows speedy return to service for foot traffic and overlaying with carpets, tiles, etc., where appropriate
- One-pack product eliminates on-site batching and ensures consistency of mixed product

Description

Cemtop products consist of a blend of selected cements and aggregates modified with polymers and flow agents.

The products are supplied as a powder requiring only the addition of water to produce a self-smoothing, free flowing material.

The products are used in conjunction with Nitoprime 33.

Standards compliance

Cemtop products comply with classifications according to EN13813:2002 (see the table)

EN13501-1:2007 - fire resistance classification as A1b

Specification clauses

Floor areas so designated should be covered with the Cemtop product as manufactured by Fosroc. The product should be applied in accordance with the manufacturer's application instructions.

CE	
Fosroc Ltd Drayton Manor Business Park, Coleshill Road, Tamworth, B78 3XN, UK 14 DoP: UK9-39	
Cemtop GP (C25F5AR2)	
EN 13813: 2002: Self-levelling cementitious Compounds for Floor Screeds	
Compressive strength	>25 (MPa)
Flexural strength	>5 (MPa)
Wearing resistance	<AR2
Fire resistance	NPD

CE	
Fosroc Ltd Drayton Manor Business Park, Coleshill Road, Tamworth, B78 3XN, UK 14 DoP: UK9-42	
Cemtop XD (C35F7AR1)	
EN 13813: 2002: Self-levelling cementitious Compounds for Floor Screeds	
Compressive strength	>35 (MPa)
Flexural strength	>7 (MPa)
Wearing resistance	<AR1
Fire resistance	NPD

Fosroc® Cemtop

Properties

See 'Physical properties' table on page 3 of this data sheet.

Application instructions

Although the products have been designed for application by pump, they can also be applied by hand.

Installation by pump

This is a specialist activity and the product must be applied by a contractor who has been fully trained in the use of the product using suitable equipment.

Installation by hand

Typically, in areas of less than 100 m² it will be more practical to install Cemtop by hand.

Surface preparation

It is essential that both new and old concrete floors are correctly prepared prior to the application of Cemtop.

New concrete floors should have been placed for at least 21 days and have a moisture content of less than 5%. They should be dry, sound and free of wax, grease, oils, fats, soil, mortar and paint splashes or curing compound residues, loose or foreign material and laitance. Laitance should be removed by light scabbling or blasting followed by washing and vacuuming to remove dust debris. Light oil and grease staining can be removed with proprietary chemical degreaser, followed by washing with clean water.

In old concrete where deep seated contamination has occurred, mechanical methods such as blasting, grinding and scabbling should be used to provide a suitable clean surface.

For recommendations or additional information regarding substrate preparation, please contact Fosroc.

Application procedure

Thoroughly prepare the floor surface as above.

Prime the surface with Nitoprime 33 (1 : 5 primer to water ratio by volume) and allow to dry.

Re-prime the surface with Nitoprime 33 (1 : 3 primer to water ratio by volume) and allow to dry.

Apply Cemtop to the required thickness onto the dry, primed surface.

Priming

The objective of priming is to seal the substrate to prevent release of air from the substrate.

Mixing

By pump - In accordance with the contractor's procedure.

By hand - Mix 25 kg of Cemtop with the required amount of clean water (see 'Estimating' table on page 3). A typical batch would be 2 x 25 kg bags of the product.

Pour the water into a clean mixing vessel. Add the powder slowly to the water, mixing continuously with a heavy duty drill and purpose-made paddle. Mixing should continue for at least 3 minutes until a smooth and creamy consistency is obtained.

Ensure that sufficient labour is available to enable continuous mixing and pouring.

Place the Cemtop within 2 minutes of completion of mixing.

Pour the mixed material on to the dry primed surface, spread with trowel and allow to level.

Roll surface with a spiked roller to aid air release and levelling properties. Do not over-roll.

To reduce the formation of seam lines, freshly mixed Cemtop should be placed within 5 minutes of the previous adjacent batch being laid.

Note: If the mix stiffens it should be discarded, do not attempt to re-mix with water.

Dual layer — Cemtop XD and Cemtop GP

Where a heavy duty, highly abrasion resistant finish is required use Cemtop GP as base layer, topped with Cemtop XD.

Thoroughly prepare the floor surface.

Prime the surface with Nitoprime 33 (1 : 5 primer to water ratio by volume) and allow to dry.

Re-prime the surface with Nitoprime 33 (1 : 3 primer to water ratio by volume) and allow to dry.

Apply Cemtop GP to the required thickness onto the dry, primed surface.

At the onset of initial set, abrade the surface with a stiff bristle broom to provide a mechanical key for the next layer.

When hardened, prime Cemtop GP with Nitoprime 33 (1 : 3 primer to water ratio by volume).

Apply Cemtop XD to the primed Cemtop GP.

If Cemtop XD is not applied the same day as Cemtop GP then the hardened Cemtop GP should be primed on the day of application and primed again prior to the application of Cemtop XD or Cemtop GP (both at 1 : 3 water: primer ratio by volume).

Fosroc® Cemtop

Uses

	Cemtop GP	Cemtop XD
Underlayment before decorative finish for foot traffic and light commercial areas:	✓	—
Heavy-duty underlayment for industrial areas:	✓	—
Final wearing overlayment for foot traffic area light: commercial, or heavy-duty industrial areas:	—	✓
Suitable for overcoating with Nitoflor FC130 and then Nitoflor FC140:	✓	✓

Physical properties

	Test Method	Cemtop GP	Cemtop XD
Compressive strength at 28 days	EN13892-2:2002	25 N/mm ²	35 N/mm ²
Flexural strength at 28 days	EN138892-2:2002	5 N/mm ²	8.0 N/mm ²
Abrasion resistance at 28 days	EN 13892-4:2002	170 µm	30 µm
Bond strength at 28 days	EN13892-8:2002	1.7 N/mm ²	2.0 N/mm ²
Impact resistance (Pass: <1mm)	BS8204-1:2003	0.7 mm	0.5 mm
Slip resistance test at 28 days (Pass: >40) Traffic time at 20°C —	EN13036- 4: 2011	Wet: 54 Dry: 66	Wet: 58 Dry: 80
Foot traffic: Light traffic: Heavy traffic:		4 hours 36 hours	4 hours 36 hours

Limitations

Concrete slabs onto which the Cemtop is to be applied must have a surface temperature of at least +5°C with air temperature maintained at +10°C or more during application. For temperatures in excess of 25°C during application refer to Fosroc Customer Services Department.

Protect from freezing for 48 hours after placement.

To prevent rapid drying protect from direct sunlight and/or drying winds during application and the initial curing period.

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

Cemtop should not be applied to asphalt substrates.

Cemtop should not be applied to external surfaces or surfaces subject to wetting.

Estimating

	Cemtop GP	Cemtop XD
Application thickness:	5 to 50 mm	6 to 12 mm*
Application method:	Pump/hand	Pump/hand
Theoretical coverage:	1.7 kg/mm/m ²	1.7 kg/mm/m ²
Supply:	25 kg bags	25 kg bags
Water addition per 25 kg bag:	4.25~4.75 litres	4.25~4.75 litres

* Can be taken down to a chamfered edge.

Nitoprime 33:

5 m²/litre of concentrate per 2 priming coats
4 m²/litre of concentrate per 3 priming coats
3 m²/litre of concentrate per 4 priming coats

Supply:

25 litre containers

Storage

Store in unopened bags in cool dry internal conditions.

The product has a shelf life of 6 months from the date of manufacture if kept in a dry storage in the original, unopened bags. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to less than 3 months.

Nitoprime 33 has a shelf life of 12 months if stored at 20°C. Protect from frost and extreme heat.

Precautions

Health and safety

For further information refer to appropriate Material Safety Data Sheet.

Fire

Cemtop products and Nitoprime 33 are non-flammable. The fire resistance of Cemtop is classified as A1b according to EN13501-1:2007.

Fosroc® Cemtop

Additional information

Joints

Expansion joints in the existing substrate must be continued through the Cemtop products and filled to the required level with Nitoseal MS300. The Cemtop system can be laid over construction joints or day joints. However, if these joints subsequently move, reflective cracking may occur.

Overcoating

Use with Nitoflor FC130 and Nitoflor FC150 floor coatings

In certain circumstances, it will be appropriate to protect Cemtop GP and Cemtop XD with an epoxy floor coating such as Nitoflor FC130 or Nitoflor FC150.

Nitoflor FC130

Being water vapour permeable, this product can be applied to Cemtop GP or Cemtop XD. The first coat must be applied within 6 hours of the Cemtop being laid.

Nitoflor FC130 provides a chemical resistant pigmented sealing coat which is dustproof, easily cleaned and resistant to penetration of oils and liquids. Two coats are required. See data sheet for details.

Nitoflor FC150

If additional chemical resistance is required, Nitoflor FC150 can be applied over a single coat of Nitoflor FC130.

It is recommended that Fosroc's technical department should be consulted prior to the installation of a combined product system such as the systems described in this data sheet.

Fosroc and Cemtop are trademarks
of Fosroc International Limited



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 Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of 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 of information given by it. All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the latest version.

Fosroc Limited

Drayton Manor Business Park
Coleshill Road, Tamworth,
Staffordshire B78 3XN. UK

www.fosroc.com

telephone:
+44 (0) 1827 262222

fax:
+44 (0) 1827 262444

email:
enquiryuk@fosroc.com



Certificate number FM 610