

CEMPROTEC LEVELLING COAT

Self-Levelling Cementitious Mortar for Concrete Floors

USES

CEMPROTEC LEVELLING COAT is a two component cementitious mortar for levelling tamped or uneven concrete floors in heavily trafficked areas prior to the application of **CEMPROTEC E-FLOOR**.

ADVANTAGES

- Materials are pre-packaged in a convenient and easy to handle size, requiring only mixing on site to give a mortar which can be rapidly applied by trowel or squeegee.
- Suitable for use on both level and sloping substrates and ramps.
- Wide range of application thickness. Can be applied in thicknesses ranging from 0 to 60mm.
- Can be applied to saturated substrates, or floors with no effective waterproofing membrane, without risk of osmotic blistering.
- Excellent adhesion to dry or damp cementitious substrates.
- Rapid hardening - Hydrates to give high early strength material with low moisture, enabling minimum overcoat times.
- Water-based product, which cures without the release of hazardous solvents. Equipment easily cleaned with water.
- Dense matrix offers low permeability to water, even at 10 bar positive and negative pressure.

PRODUCT DESCRIPTION

CEMPROTEC LEVELLING COAT is a two component epoxy and polymer modified cementitious screed for levelling concrete substrates in trafficked areas prior to the application of **CEMPROTEC E-FLOOR**. It incorporates advanced cement chemistry, metakaolin, fibre, epoxy and styrene acrylic copolymer technology to give enhanced performance and excellent adhesion to concrete surfaces. When mixed, it exhibits a degree of flow to enable ease of application by pouring or pumping techniques to give an even finish. It hydrates to form a dense screed, which exhibits both polymeric and resinous properties giving low permeability to water and ensuring long term performance. It is specially formulated to harden rapidly to form a durable surface, which can typically be overcoated within 24 hours. The material is designed for application to sound substrates, any joints and "live" cracks must be continued through the finished system.



Flexcrete Technologies Ltd
Tomlinson Road, Leyland PR25 2DY England
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0086-CPD-530942

EN1504-2: Surface Protection Systems - Coating
 Moisture Control (MCC) Rigid Trafficked System

Compressive Strength:	Class I ≥ 35 MPa
Adhesive Bond:	≥ 2.0 MPa
Water Vapour Permeability:	Class I $<5m$
Coefficient of Thermal Expansion:	$\leq 30 \times 10^{-6} K^{-1}$
Thermal Compatibility EN13687-1:	> 2.0 MPa
Capillary Absorption:	Class III $<0.1 kg.m^{-2}.h^{-0.5}$
Dangerous Substances:	Complies with 5.4
Reaction to Fire:	Class F

TECHNICAL DATA

Mixed Colour:	Concrete Grey
Mixed Density:	2000 kg/m ³
Application Thickness:	0-60mm, typically 10mm
Min Application Temperature:	5°C
Max Application Temperature:	35°C
Working Life (Approx):	30 minutes at 20°C
Finishing Time:	Within 10 mins of placing
Drying Time:	2-3 hours

MECHANICAL CHARACTERISTICS (TYPICAL)

Compressive Strength:	BS 4551 Tested at 20°C
4 hours	4 - 10 MPa
1 day	10 - 20 MPa
7 days	30 - 40 MPa
28 days	45 - 55 MPa
Flexural Strength:	BS 4551 Tested at 20°C
1 day	5 MPa
28 days	12 MPa
Adhesive Strength:	BS 1881 Part 207
Concrete	3 MPa (including Primer)
Asphalt	>2 MPa (failure in substrate)

APPLICATION DATA

Application Guide available on request.

PREPARATION

The areas to be treated must be free from all unsound material, i.e. surface laitance, dust, oil, grease, organic growth or previous surface treatments, and smooth surfaces should be mechanically roughened. This is best achieved using totally enclosed shot blasting equipment or alternatively a surface scaler/planer or scabbling machine can be used. Areas still exhibiting signs of oil, grease, etc, must be treated with a proprietary degreasant. In instances of heavy contamination, it may be necessary to use hot compressed air equipment, flame spalling or steam cleaning techniques. All debris should be removed to leave a thoroughly clean, dust free, open textured surface. Concrete should have a minimum strength of 20Mpa.

PRIMING

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water. To prevent out-gassing, the substrate should be sealed with **CEMPROTEC EF PRIMER**, at a typical coverage rate of 5m²/litre. Allow to become transparent, typically 1-3 hours, dependent upon climatic conditions, before proceeding.

MIXING

It is important to ensure that a continuous supply of mixed material is available for laying. Shake Part A (liquid) and pour into a suitable mixing vessel. Slowly add the Part B (powder) and mix for a minimum of 5 minutes until homogeneous. The modules must be mechanically mixed using a drill and paddle specially designed to entrap as little air as possible. On larger contracts, multiple packs can be mixed at once. To maximise the working life, the Part A (liquid) should be stored in cool conditions or chilled in cold water. Bottles of liquid and bags of powder are **not** to be split.

JOINTS

All construction joints and "live" cracks in the existing floor must be continued through into the new coating. The material should be continued into the faces of joints or cracks. Allow to cure for a minimum of 24 hours before reinstating joints with suitable sealant.

PLACING

CEMPROTEC LEVELLING COAT should be poured or pumped onto the prepared surface and spread to the required thickness with a trowel, squeegee or pin leveller. Lightly roll the top surface with a spiked roller to remove entrapped air and to produce a slightly dimpled finish.

Finishing must be completed within the working life of the material and no later than 10 minutes after placing. Allow to cure for a minimum of 4 hours before subjecting the application to light foot traffic.

CURING AND OVERCOATING

Normal procedures relating to curing of cementitious products should be strictly adhered to. The surface must be protected from strong sunlight, drying winds and high air movements, to prevent skinning during placing and rapid drying out in the plastic state. Cure using **FLEXCRETE CURING MEMBRANE WB**, taking care to avoid overspray onto surfaces yet to be treated.

Allow to cure overnight and prime with **CEMPROTEC EF PRIMER** before over coating with **CEMPROTEC E-FLOOR**.

CLEANING

All tools should be cleaned with water immediately after use.

SHELF LIFE

Shelf life is 12 months in dry, frost free conditions at moderate temperatures not greater than 20°C.

PACKAGING AND COVERAGE

Pack Size: 30kg
Coverage: 15 litres per 30kg pack
Coverage: 2.0 kg/mm/m²; i.e. A 30kg composite pack covers 3m² at 5mm thickness

SAFETY DATA

Safety Data Sheet available on request.

The information herein is correct to the best of our knowledge, but it does not necessarily refer to the particular requirements of the customer. If the customer has any particular requirements it should make them known in writing to Flexcrete Technologies Limited, and obtain further advice accordingly.



Flexcrete Technologies Limited
Tomlinson Road
Leyland
Lancashire
PR25 2DY
United Kingdom
Tel: +44 (0) 845 260 7005
Fax: +44 (0) 845 260 7006
Email: info@flexcrete.com
Web: www.flexcrete.com



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OHS 597351
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