

Epoxol[®] CM

Three-component, self-levelling epoxy-cementitious system, for flooring applications



Description

Three-component, epoxy-cementitious system, suitable for the creation of self-levelling floor coatings of 1-3mm thickness.

Classified as a CT-C30-F7-A3-B2,0 screed material according to EN 13813

Fields of application

- Leveling, smoothing and repairing of floors that are to be overcoated with resinous flooring systems (epoxy, polyurethane or polyaspartic) or prior to the application of ceramic tiles, wooden flooring, carpets, PVC floors, etc.
- As an intermediate flooring layer on wet concrete surfaces (for min. layer thickness of 2mm)
- As a final floor coating in areas of light-medium traffic, e.g. residential storage rooms, attics, etc.

Properties - Advantages

- Smooth finish with excellent wear resistance
- High adhesion on concrete substrates
- Excellent self-levelling properties
- Water vapour permeable
- High mechanical strength and resistance to liquids
- Does not contain any solvents or volatile organic compounds (*Zero VOC*)
- Easy and affordable solution for smoothing, repairing and leveling existing floors, prior to the application of resinous flooring systems

Certificates – Test reports

- CE certification acc. to EN 13813
Classified as a cementitious screed material CT-C30-F7-A3-B2,0
- Test report by the external independent quality control laboratory Geoterra (No. 2020/302)



Packing

Set (A+B+C) of 31kg

Colour

Grey

Technical Characteristics

Mixing ratio A:B:C (by weight)	48,5:11,5:250
Density A+B+C (EN ISO 2811-1)	2,20kg/L (±0,05)
Compressive strength (EN 13892-2)	>30MPa
Flexural strength (EN 13892-2)	>7MPa
Wear resistance – Böhme (EN 13892-3)	<3cm ³ /50cm ²
Adhesion strength (EN 13892-8)	>3MPa
Maximum application thickness per layer	3mm

Consumption: 2,25kg/m² per mm of thickness

Application conditions

Substrate moisture content	<8%
Relative air humidity (RH)	<80%
Application temperature (ambient - substrate)	+8°C min. / +30°C max.

Curing details

Pot life (+25°C, RH 50%)	20 minutes
Drying time (+25°C, RH 50%)	12 hours
Dry to overcoat (+25°C, RH 50%)	24-48 hours (<i>provided that surface moisture is within permissible limits</i>)

** Low temperatures and high humidity during application and/or curing prolong the above times, while high temperatures reduce them*

Appropriate primers on cementitious substrate

	Primer	Description - Details
Water-based	Acqua Primer	Two-component, water-based epoxy primer
Solvent-free	Epoxol® Primer SF	Two-component, solvent-free epoxy primer for flooring applications
	Epoxol® Primer SF-P	Two-component, solvent-free epoxy primer, ideal in cases of substrates with increased porosity
	Neopox® Primer WS	Two-component, solvent-free epoxy primer for wet surfaces (without ponding water or rising moisture)
	Neopox® Primer AY	Two-component, solvent-free anti-osmotic epoxy primer, for floors with rising moisture
Solvent-based	Epoxol® Primer	Two-component, solvent-based epoxy primer

Instructions for use

Substrate preparation

The concrete must be min. Grade C20/25, with a tensile strength of $\geq 1,5\text{MPa}$, and allowed to cure for at least 28 days, taking all the necessary maintenance measures during its curing period. The cementitious substrate must be properly prepared mechanically (e.g. grinding, shot blasting, milling etc.) to smooth out the irregularities, achieve an open-textured surface and ensure optimum adhesion.

The surface must be sufficiently dry and protected from rising moisture, stable, clean and free of dust, grease, oil, etc. Loose friable material must be fully removed by brushing or sanding with a suitable machine and a high suction vacuum cleaner.

The surface must be as smooth and flat as possible, as well as continuous (ie without voids, cracks etc.)

Repairs to the substrate, filling of joints, blowholes/voids and surface leveling must be carried out using appropriate repairing products, such as **Epoxol® CM** itself and the epoxy putty **Epoxol® Putty** after proper priming.

Priming

For the stabilization of the substrate and sealing of pores, as well as for creating the optimum conditions for stronger adhesion and higher coverage of the subsequent epoxy coating, it is recommended to apply the water-based epoxy **Acqua Primer** or an alternative appropriate **NEOTEX®** primer (see table), depending on the substrate. In cases of substrates with increased porosity, an additional priming layer may be required.

In order to ensure the adhesion of the self-leveling epoxy system that follows, especially in case it is applied more than 24 hours after the application of the primer, it is recommended to sparsely broadcast Quartz Sand M-32 (0,1-0,3mm, average grain size 0,26mm) on the still fresh layer of the primer, with an estimated sand consumption of 0,3-0,5kg/m². After drying, any loose grains should be removed with a high suction vacuum cleaner.

Application

Prior to mixing the components of **Epoxol® CM**, component A is stirred thoroughly for app. 1 minute. Then, component B is added into component A at the predetermined ratio (4,85A : 1,15B by weight) and the two components are mixed for app. 1 minute with a low speed electric stirrer, until the mixture is homogeneous. Component C is then gradually added into the mixture under continuous stirring with a low-speed electric stirrer. After app. 50-80% of the required quantity of component C has been added, clean water is added in the mixture (app. 2-3% of A+B+C quantity, i.e. 0,7-1L of water for the whole 31kg set). Finally, the remaining required quantity of component C is added in the mixture under continuous stirring. The stirring may go on for app. 3 minutes, until the mixture becomes homogeneous and free of lumps. The mixture should be then left for app. 3-5 minutes inside the container and re-mixed for a few seconds before being applied on the surface.

Epoxol® CM is poured on the surface and applied by notched trowel or squeegee, in one layer of 1-3mm thickness, using at the same time a spiked roller, in order to avoid air entrapment and achieve a smooth surface, without any imperfections. This process demands also the use of spiked shoes.

Special notes

- **Epoxol® CM** should not be applied under wet conditions, or if wet conditions are expected to prevail during the application or the curing period of the layers. After the application, **Epoxol® CM** must be protected from moisture for at least 24 hours. The area must be well ventilated in order to avoid excess moisture during curing.
- The components should not have been stored at very low or very high temperatures, especially before mixing. Mixing and stirring of the mixture should be preferably done in the shade. The stirring of the mixture must be done mechanically and not manually with a rod, etc.
- Excessive stirring of the material should be avoided, in order to mitigate the risk of air entrapment. After stirring the mixture, it is recommended to apply the material shortly in order to avoid the development of high temperatures and potential hardening inside the can
- The substrate temperature must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish
- Due to the nature of the material, the direct and constant exposure of the final coating to UV radiation may cause the phenomenon of chalking over time. **Epoxol® CM** must not remain exposed in exterior areas
- After the application of the system, it is recommended that the floor's expansion joints are sealed with the elastomeric polyurethane sealant **Neotex® PU Joint** or with the epoxy repairing material **Epoxol® Putty** in its elastic version (mixing ratio 1A : 2-2,5B w/w)
- Not recommended for use on surfaces subject to vibrations or thermal shocks

Colour	Grey
Packing	Set (A+B+C) of 31kg
Cleaning of tools – Stains removal	By water immediately after application. In case of hardened stains, by mechanical means
UFI code	<i>Component A:</i> A110-A0J5-K003-S5RV <i>Component B:</i> 6410-U07J-V00K-EHAX <i>Component C:</i> 7710-A0WY-6002-3UX0
Storage stability	<i>Components A & B:</i> 2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight <i>Component C:</i> 12 months, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight

	
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DoP No.: 4950-63 EN 13813 CT-C30-F7-A3-B2,0 Epoxol® CM Cementitious screed material for interior use	
Release of corrosive substances	CT
Compressive strength	C30
Flexural strength	F7
Wear resistance - Böhme	A3
Bond strength	B2,0

The information supplied in this datasheet, concerning the uses and the applications of the product, is based on the experience and knowledge of NEOTEX® SA. It is offered as a service to designers and contractors to help them find potential solutions. However, as a supplier, NEOTEX® SA does not control the actual use of the product and therefore cannot be held responsible for the results of its use. As a result of continual technical evolution, it is up to our clients to check with our technical department that this present data sheet has not been modified by a more recent edition

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