Advanced
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Finishing system for concrete floors

Tecnopav EP 903 EC

PROTECTIVE WEAR RESISTANT COATING
PHYSICAL PROTECTION

CYCLE CE approved – Certificate n. 1305 - CPD - 0808
EN 1504-2 prospect ZA.1f

General — Epoxy-amine three-component product, charged with quartz sand in specific particle size distribution, solvent free, hardening at ambient temperatures as wear resistant flooring mortar.

Characteristics
Excellent chemical resistance
Good abrasion resistance
Optimal wear resistance.
Fast, ideal for low temperatures

use — For intern applications in civil and industrial buildings, for the realisation of a continuous resin floor, which is wear resistant, resilient, at high thickness from 6÷12 mm.

Application
Tools : by ruler and finished by helicopter (or by trowel for small areas)
Applied on : Tecnopav EP 903 or Tecnofix EP 170
Temperature of application: 10 ÷ 35°C and relative humidity max. 60%
Clean tools with : MEK, acetone or other solvents for epoxy

APPLICATION METHOD

SUBSTRATE PREPARATION

Prior to proceeding with the application of the protective coatings, it is necessary to verify the condition of the cementitious substrate: verifying in clean and absent of oil traces, greases, delaminating particles, free from cracks and discontinuities. Continue with the preparation of the substrate choosing the best-suited procedure accordingly:
- Elimination with proper equipment of the superficial dust when the substrate seems in good condition. Recommended are vacuum aspiration and/or high pressure water cleaning with pressured water;
- Repair or level with cement based mortars or resin based materials, when the substrate has cracks or anomalies. In any case, work only on de-dusted and cohesive substrates;
-Ssandblast or grinding in case of un-cohesive parts.
Avoid the application on substrates contaminated with oil and/or greases.

CHOICE OF PRIMER

The use of a primer as base-coat is necessary to consolidate the substrate and to improve the adhesion of any consecutive protective coating. Depending on the type of substrate it is recommended to use the following primers:

- **LEGANTE TECNOPAV EP 903 EC (binder)** with smooth and well compacted and dry substrates (max. humidity 3%).
- **TECNOFIX EP 170** for irregular, but cohesive substrates, suited also in case of presence of only superficial humidity.

(see also the relative datasheets)

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APPLICATION

Make sure the room is well ventilated and follow the recommendations stated in the Material Safety Data Sheet on the use of PPE (Personal Protective Equipment).
Proceed with the application of **Tecnopav EP 903 EC** as follows:
1) pour component B into component A and mix for 2-3 minutes, or until complete homogenization of the mixture with a suitable drill whip at low speed, apply the mixture using a roller short hair or a brush (for small surfaces).
2) Prepare a mixture A + B again proceeding as in step 1, then, still under agitation (ideal is to use a small concrete mixer due to the thixotropy of the final mortar), add the quartz sand and mix until the paste is homogeneous, with a texture type 'damp earth'.
3) Apply the mortar using a ruler directly on the previously applied layer of resin, before it is dried (wet on wet technique), taking care to distribute it evenly. It is determined that with a packaging of 88 kg, to a final thickness of 10 mm, about 4 to 4.5 m^2 can be applied.
4) Once hardening starting, about 24 hours at 20°C ambient temperature, helicopter finish is applied until a smooth and compacted surface is obtained.
The coating obtained can than receive the finishing layer (such as top coating based on polyurethane).

IMPORTANT : when the temperature of the ambient and the substrate are less than 15°C, it is necessary to heat separately the 2 components of the product to a maximum temperature of 30°C (eventually en bain-marie) in order to maintain the low viscosity and the better applicability.

DO NOT APPLY AT TEMPERATURE LOWER THAN 10°C.

APPLICATION CONDITIONS

Temperature of substrate	: +10°C / +35°C
Humidity of substrate	: ≤ 3%
Ambient temperature	: +10°C / +35°C
Relative humidity ambient	: max 60%
Dew point	: the substrate and the product must be at a temperature of minimum 3°C above the dew-point to reduce the risk of condensation

PACKAGING

☒ supply - *kg*

Component	a	b	c	a+b+c
pail	5	2,5	75 (3 bags x 20 kg	82,5

STORAGE

Store the original and unopened packaging at a temperature between + 5°C and + 35°C. Product can be kept 12 months from the production date.

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TECHNICAL CHARACTERISTICS

APPLICATIVE CHARACTERISTICS at 20 ± 2°C	Test method	Unit of measurement	Typical values
Mixing ratio in weight	-	A : B : C	5 : 2,5 : 75
Solid residue in total in weight	-	%	~ 100
Consumption	-	kg/mm/m^2	~ 2
Specific weight	EN ISO 2811-1	kg/l	~ 2
Pot life	EN ISO 9514	minutes	50 ± 15
Workability time	EN ISO 9514	minutes	30 ± 5
Touch dry	I – 54 (intern)	hours	6 ± 1
Completely hardened	-	days	7

PERFORMANCE CHARACTERISITICS	Test method	Unit of measurement	Typical values	Threshold values according EN 1504-2
Capillary water absorption and permeability	EN 1062-3	Kg/m2xh^{0,5}	0,0021	<0,1
Shock resistance	EN 6272-1	Nm	>20 (class III)	≥4 (class I) ≥10 (class II) ≥20 (class III)
Adhesion direct pulling on concrete (with primer)	EN 1542	N/mm^2 Type of failure	> 4 A = failure in concrete	≥ 2 (with traffic)
Resistance to thermal shock	EN 13687-5	N/mm^2 Type of failure	>3	With traffic ≥ 2
Abrasion resistance (H22, 1000 cycles, load 1000 g)	EN 5470-1	mg	674	<3000

OTHER TECHNICAL CHARACTERISITICS	Unit of measurement	Typical values
Linear thermal dilatation coefficient	°C^{-1}	~ 1,4 x 10^{-5}
Shrinkage	%	~ 2 x 10^{-5}
Glass transition temperature	°C	≥ 40
Flexural strength	N/mm^2	≥ 25
Compressive strength	N/mm^2	≥ 70
Elasticity modulus in compression	N/mm^2	>2000

The above date are based on our actual and most experienced practical and laboratory knowledge and the results are collected from application of the product in different situations. Tecnochem Italiana does not assume any responsibility regarding inadequate or negative performance as a result of improper use of the product of for defects deriving from factors or elements other than the quality of the product including improper storage. The technical characteristics and performance mentioned in this datasheet are updated periodically . The revision dates and number of revision of the datasheets are listed in the table below . Eventual variations are traceable on our website www.tecnochem.it where the most updated datasheets can be retrieved.

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