Tecnoepo Flooring System 185

Multi-layer solvent free selflevelling epoxy system for industrial floors at a thickness from 0,5 to 4 mm

Certificate ICMQ 1305-CPD-0808

CE Approved

Standard EN 1504-2 prospect ZA.1f

Direttive 89/106/CEE

ICMQ

CERTIFICATE OF FACTORY PRODUCTION CONTROL

1305-CPD-0808

In compliance with the Directive 89/106/EEC of the Council of European Communities of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to the construction products (Construction Products Directive – CPD), amended by the Directive 93/68/EEC of the Council of European Communities of 22 July 1993, it has been stated that the construction product

Products and systems for the protection and repair of concrete structures

(surface protection systems for concrete, structural and non-structural repair, structural bonding, concrete injection, anchoring of reinforcing steel bar and reinforcement corrosion protection)

Produced by the manufacturer

Tecnochem Italiana S.p.A.
Via Sorte, 2/4 – 24030 Barzana (BG)

in the factory
Via Sorte, 2/4 – 24030 Barzana (BG)

is submitted by the manufacturer to the initial type-testing of the product, a factory production control and to the further testing of samples taken at the factory and that ICMQ S.p.A. has performed the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

This certificate attests that all provisions concerning the attestation of factory production control described in Annex ZA of the standards:

EN 1504-2:2004, EN 1504-3:2005, EN 1504-4:2004, EN 1504-5:2004, EN 1504-6:2006 and EN 1504-7:2006

were applied.

This certificate was first issued on 2008-09-24 and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly.

Current issue
Milan, 2011-04-20

General Manager
(Ing. Lorenzo Orsenigo)

TECNOCHEM E' LEED®

LEED®

Leadership **E**nergy
Environmental **D**esign

TECNOCHEM ITALIANA SPA
è membro del
GREEN BUILDING COUNCIL

THE PRODUCTS:

Primer TECNOFIX EP 110 → Primer two-component based on epoxy-amines, not charged with fillers, solvent free.
Comp. A: 5 Kg Comp. B: 3 Kg

TECNOPAV EP 185 → Two-component protective coating based on epoxy-amines, charged withe fillers and pigments, solvent free. RAL colours .
Comp. A: 8 Kg Comp. B: 2 Kg

QUARTZ 0,25

QUARTZ 0,50

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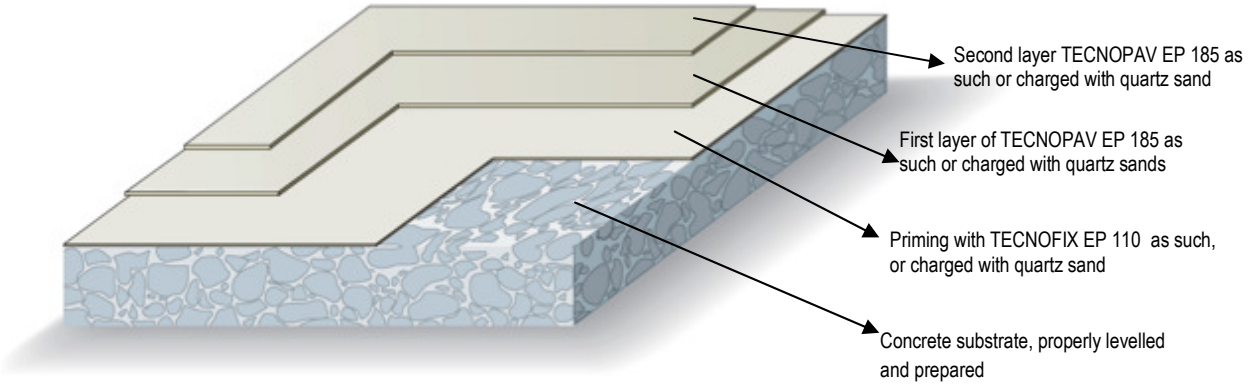
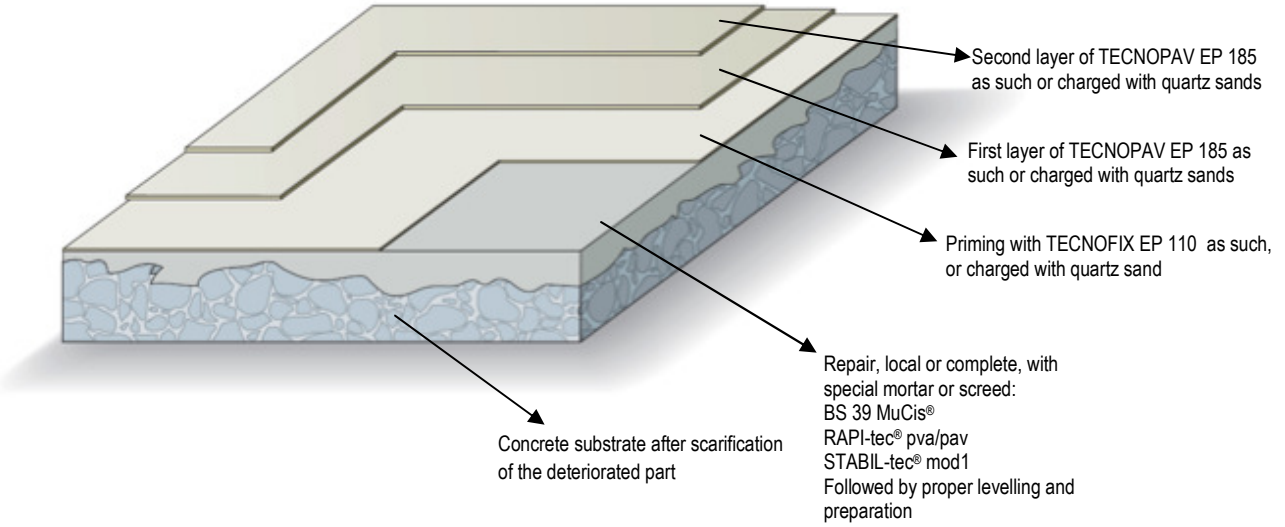
APPLICATION ON A CONCRETE SUFFICIENTLY SMOOTH



APPLICATION ON A CONCRETE AFTER REPAIR OR RESTORATION



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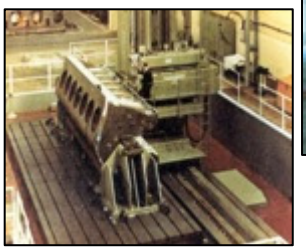
- Parking, carparks.
- Supermarket.
- Commercial centers.
- Exposition salons
- Wine production and storage .
- Food storage areas .
- Printing warehouses
- Industrial textile warehouses.
- Logistic deposit activities

- Ind. of agro/food
- Ind. of sweets and pastry
- Ind. of cheese production
- Textile industry
- Print and paper industry
- Chemical and pharmaceutical industry
- Electronic and electro technic industry
- Wood processing industry
- Supermarkets and commercial centers
- Convention and congress area
- Exposition rooms and car centers
- Schools and nursery
- Offices and postal centers
- Canteens
- Discos and meeting points
- Hospital and health centers

- Food production industry
- Metallurgic industry
- Metal-mechanic industry
- Textile industry

- Pprinting and paper industry
- Chemical and farmaceutical industry
- Heavy manufacturing industry
- Commercial centers, deposit zones of transit containers etc
- Harbour and docks.



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EPOXY SYSTEM THREE LAYERS THICKNESS 0.4 to 0.6 mm

Operative phases:

- PREPARATION OF THE SUBSTRATE: Abrasion of the surface by mechanical equipment: dust free vacuum blasting equipped with a closed circuit, followed by vacuuming and cleaning of the substrate.
- Filling of any holes and cracks.
- On the well prepared substrate, apply a first coat of primer **TECNOFIX EP 110**, by roller or brush.
- When the primer is touch dry, apply the protective coating **TECNOPAV EP 185** by roller or brush (see colour chart).
- Abrasion of the surface by mechanical equipment: grinder equipped with abrasive discs.
- Vacuuming and cleaning of the support.
- Surface finish with **TECNOPAV EP 185**, spread with a roller or brush.

Estimated consumption:

Products	Kg/m^2
TECNOFIX EP 110 *Adhesion promoter and saturation primer for the application of selflevelling coatings.*	0,160
TECNOPAV EP 185 *Protective coating* CYCLE CE approved – Certificate n. 1305 - CPD - 0808 **EN 1504-2 prospect ZA.1f**	0,300 (two layers)

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EPOXY MULTILAYER SYSTEM WITH 2 LAYERS-2 to 2.2 mm THICK

Operative phases:

- PREPARATION OF THE SUBSTRATE: Abrasion of the surface by mechanical equipment: dustfree vacuum blasting equipped with a closed circuit, followed by vacuuming and cleaning of the substrate.
- On the well prepared substrate, apply a first coat of primer **TECNOFIX EP 110**, charged with dry quartz sand 0,25÷0,50, by trowel; Apply while still wet, dry quartz sand with dimension 0,25.
- When the primer is touch dry, remove the excess, and follow by abrasion of the surface by mechanical equipment: sander equipped with abrasive discs.
- Remove the excess and clean the substrate thoroughly
- After not less than 24 hours, apply the final coating **TECNOPAV EP 185**, apply by trowel, and filled with quartz of particle size 0,50 in order to obtain an anti-skid finish (see colour cards).

Estimated consumption:

Products	Kg/m²
TECNOFIX EP 110 *Two-component epoxy primer, solvent free. To be applied as base coat for cement based substrates with good finish.*	0,5
TECNOPAV EP 185 (RAL 7038) *Protective coating* CYCLE CE approved – Certificate n. 1305 - CPD - 0809 **EN 1504-2 prospect ZA.1f**	0,5
QUARTZ 0,25	1÷1,5
QUARTZ 0,50	0,5÷0,75

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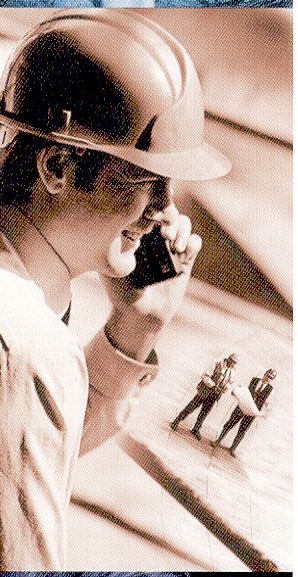

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MULTILAYER SYSTEM EPOXY 4 LAYERS - THICKNESS 3.5 – 4 mm

Operative phases:

- Abrasion of the substrate using mechanical equipment like sandblasting or grinding machine equipped with closed-circuit vacuum system for dust free operation.
- Vacuuming and careful cleaning of the support;
- Apply a coat of epoxy resin adhesive TECNOFIX EP 110, by a spatula, charged with quartz 0.25/0.50 mm and scattering quartz sand next with dimension of 0:25 as primer;
- Removal of excess quartz;
- Apply a second coat of epoxy resin adhesive TECNOFIX EP 110 by spatula, charged with quartz 0.25/0.50 mm, next scatter with quartz measuring 0.25;
- Removal of excess quartz;
- Apply a third coat of epoxy resin adhesive TECNOFIX EP 110 by spatula, charged with quartz 0.25/0.50 mm and scatter again with quartz measuring 0.25;
- Removal of excess quartz;
- Abrasion of the surface by sanding machine tool equipped with abrasive discs;
- Suction and careful cleaning of the support;
- Apply a final thin coat of the self levelling two-component epoxy resin finish TECNOPAV 185, loaded with quartz 0.50 to obtain a non-slip surface in the colour of your choice.

Estimated consumption:

Products	Kg/m²
TECNOFIX EP 110 *Two-component epoxy primer, solvent free. To be applied as base coat for cement based substrates with good finish.*	1,5
TECNOPAV EP 185 (RAL 7038) *Protective coating* CYCLE CE approved – Certificate n. 1305 - CPD - 0809 **EN 1504-2 prospect ZA.1f**	0,5
QUARTZ / 0,25	2 ÷ 2,5
QUARTZ / 0,50	0,5 ÷ 0,75

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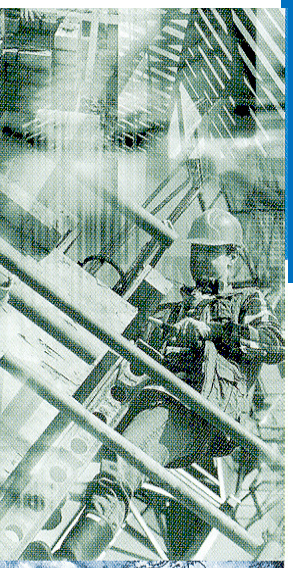

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SEALING OF THE CONTROL JOINTS

- Installation of the control joints by mechanical diamond saw;
- Vacuuming and cleaning of the joint;
- Taping both sides;
- Filling with the one-component polyurethane resin with a special gun **TECNOSEAL PLO** and smoothing with the trowel, then removal of the tapes.

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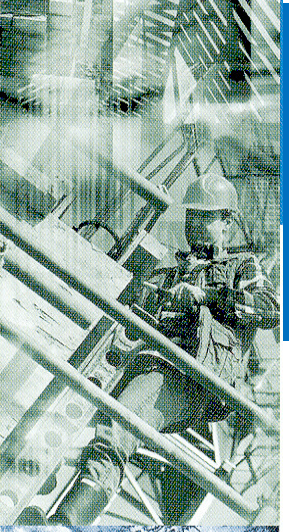

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TECHNICAL CHARACTERISTICS

APPLICATIVE CHARACTERISTICS at 20 ± 2°C	Test method	Unit of measurement	Typical values
Mixing ratio in weight	-	A : B	8:2
Specific weight	EN ISO 2811-1	kg/l	~ 1,42
Viscosity Brookfield LV	EN ISO 3219	cP	~ 5000
Solid residue in total in weight	-	%	~ 100
Consumption per layer	-	g/m^2	300 ÷ 400
Final dry thickness (per 300 g/m^2)	EN 1062-1	µ	~ 200
Pot life	EN ISO 9514	minutes	75 ± 10
Workability time	EN ISO 9514	minutes	45 ± 5
Touch dry	I – 54 (intern)	hours	~ 6
Completely hardened	-	days	7

PERFORMANCE CHARACTERISITICS	Test method	Unit of measurement	Typical values	Threshold values according EN 1504-2
Adhesion direct pulling on concrete (tested on all type of primer)	EN 1542	N/mm^2 Type of failure	> 4 A = failure in concrete	≥ 2 (with traffic)
Capillary water absorption and permeability	EN 1062-3	$Kg/m^2xh^{0,5}$	0,0016	<0,1
Abrasion resistance (H22, 1000 cycles, load 1000g)	EN 5470-1	mg	806	<3000
Wear resistance	EN 6272-1	Nm	>4 (class I)	≥4 (class I) ≥10 (class II) ≥20 (class III)
Resistance to thermal shock	EN 13687-5	N/mm^2 Type of failure	>3 A=failure concrete	≥ 2 (with traffic)

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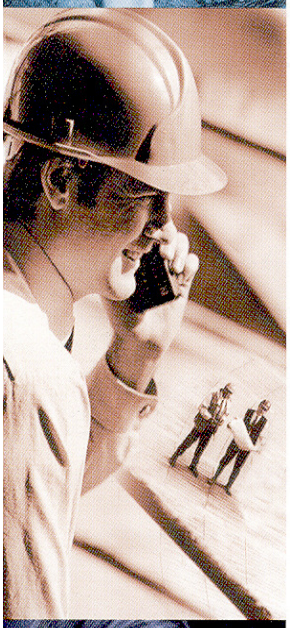

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TECNOCHEM IS LEED®

LEED® Tecnoepo Flooring System 185

Multilayer epoxy, solventfree and autolevelling system for industrial flooring of 0,5 to 4 mm thickness.

1. LEED® Credits applicable

The Tecnochem products for the finishing of industrial pavements all meet the LEED® requirements according to the LEED® scheme *US 2009, V3, New Construction, Core&Shell, School* and to LEED® *New Construction* and LEED® *Core & Shell.*

☑ **MR Credit 2,** Construction Waste Management

☑ **IEQ Credit 3.1 (IEQ Credit 3 per C&S),** Construction Indoor Air Quality Management Plan During Construction

☑ **IEQ Credit 4.2,** Low-Emitting Materials—Paints and Coatings

☑ **IEQ Credit 4.3,** Low-Emitting Materials—Flooring Systems

1.1. MR Credit 2, Construction Waste Management

The drums and waste of the Tecnochem products for Industrial flooring finishing should not be included in the LEED® counting of the jobsite regarding waste products and recoverable or recyclable waste.

1.2. IEQ Credit 3.1, Construction Indoor Air Quality Management Plan During Construction

The application of Tecnochem products for the finishing of industrial pavements is studied to comply with the requests of the QUALITY of INTERNAL AIR requested by LEED IEQ 3.1 (IEQ 3 for LEED C&C), regarding minimalizing dust and odour.

The surface preparation and the preparation of application have to be done in the following way:

1. The preparation of the surface has to be done with a grinder equipped with a vacuum cleaner so no dust is blown in the air;
2. Dustfree aspiration and cleaning of the surface;
3. Application of the product TECNOFIX EP 110 with brush or roll (not sprayed);
4. Application of the protective coating EP 185 with brush or roll (not sprayed);

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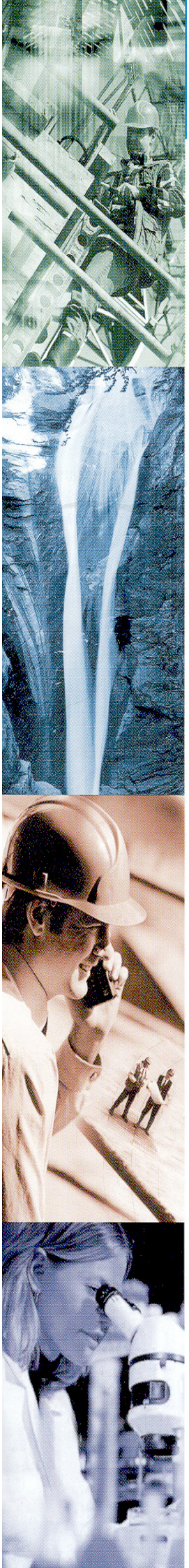

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5. Abrasion of the support by mechanical equipment (with abrasive discs), followed by aspiration and cleaning of the surface.
6. Superficial finish with TECNOPAV EP 185 with brush or roll (not sprayed).

1.3. IEQ Credit 4.2, 4.3, Lw-Emitting Materials – Paints and Coatings, Flooring System

The Tecnochem products for the finishing of industrial pavements correspond to the requests of the LEED® certifications regarding VOC, Volatile Organic Compounds:

- **IEQ Credit 4.2,** Low-Emitting Materials—Paints and Coatings.
- **IEQ Credit 4.3,** Low-Emitting Materials— Flooring System.

STRATIGRAPHY	VOC content g/L less water	LEED® US 2009 VOC Limit g/L Less water
Tecnopav EP 185 *Protective coating for flooring*	39	50
Tecnofix EP 110 *Adhesion primer*	40	100
BS 39 MuCis® *Repair Mortar*	6	100

The maximum values of indicated VOC content correspond to the limit contents of Rule 1113 SCAQMD.

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TECNOCHEM® ITALIANA SpA

TECNO ECO® LOGIC CHEM

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