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THESSALONIKI: Ionias Str., GR 57009 Kalochori, Thessaloniki, Greece, Tel.: +30 2310 467275, Fax: +30 2310 463442

Epoxol[®] Floor

Two component solvent-free epoxy system for creation of self-levelling floors

Fields of Application

Epoxol[®] Floor is a suitable screed that can be applied on cement-based floors which need high mechanical and chemical resistance, e.g. factories, laboratories, warehouses, superstores, parking places, garages, slaughterhouses, larders, hospitals, schools, etc. Thanks to its excellent covering of cracks and imperfections and quick walkability, **Epoxol[®] Floor** is also recommended for repair and refurbishment of old floors.

Properties/ Advantages

- **Epoxol[®] Floor** is a two-component epoxy system based on selected resins and hardeners without solvents which show great abrasion and yellowing resistance, significant strength and chemical resistance (to alkalis, solutions of acids, water, petroleum oils and many solvents).
- Compliant with the regulation 2004/42/EC for limitation of V.O.C. in paints and varnishes.
- It is classified as C 40-B2,0-A 12-IR4 according to EN13813.

Technical Characteristics

Appearance	Gloss
Density (EN ISO 2811.01)	1,34 kg/l
Mixing ratio (weight proportion)	100A:35B
Hardening time (tack free) (25°C)	10 hours
Substrate Temperature	+12°C to +35°C
Ambient Temperature	+12°C to +35°C
Surface humidity content	<4%
Relative atmospheric humidity	<70%
Total Hardening	~ 7 days
Hardness (Shore D, ASTM 2240)	80
Abrasion resistance (ASTM D 4060)	61 mg (with quartz sand D50 260µm(M-32) in a proportion of 1:1 by weight) (TABER TEST, CS 10/1000/1000)
Compressive strength (DIN 53452)	104 N/mm ²
Flexural strength (DIN 53452)	75 N/mm ²
Impact resistance (EN ISO 6272)	IR4
Adhesion strength (EN 13892-8)	≥ 2,5 N/mm ²
Resistance to temperature (dry loading)	from -30°C to +100°C

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Pot Life

Temperature	Time
+12°C	1 hour
+25°C	40 minutes
+30°C	30 minutes

Overcoating

Temperature	Time
+12°C	36 hours
+25°C	24 hours
+30°C	24 hours

Walkability

Temperature	Time
+12°C	36 hours
+25°C	24 hours
+30°C	24 hours

Epoxol[®] Floor

Quality/Preparation of Substrate

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm². The substrate must be clean, dry (surface humidity content <4%) and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.

Moreover, imperfections of new surfaces should be smoothed with pulveriser for lower material consumption and achieving better adhesion properties.

Application of Primer

Epoxol[®] Primer (thinned 10% per weight with **solvent Neotex 1021**) is applied in one layer (**2 coats** required in cases of increased porosity of the substrate) with roller, brush or airless spray. Before applying, mix both components (A&B) thoroughly to the correct predetermined mixing proportion by weight using a low speed electric stirrer for 2-3 minutes. When the substrate contains humidity more than 4% or there is rising moisture the surface should be primed with **Neopox[®] Primer AY**. Otherwise as a primer it can be applied **Epoxol[®] Primer SF** (solvent-free epoxy primer) or if the moisture of the substrate is up to 8%, if there is not rising moisture and the substrate temperature is > +12°C the surface should be primed with water-based primer **Acqua[®] Primer**.

In case **Epoxol[®] Floor** is applied beyond 24 hours after priming, quartz sand D50 260µm(M-32) should be spread all over the primed surface (before drying) in order to achieve good adhesion. The loose quartz sand should be removed with vacuum cleaner.

After the primer has dried, any existing imperfections (cracks, holes) should be filled using **Epoxol[®] Floor** mixed with quartz sand D50 260µm(M-32) in proportions of 1:2-1:3 by weight, or using **Epoxol[®] Putty** in proportion from 1A:1B to 2A:1B depending on application conditions.

Instructions for use

Self-levelling Epoxol[®] Floor:

After primer dries, **Epoxol[®] Floor** is applied. Mix both components A&B thoroughly to the correct predetermined mixing proportion by weight. **Epoxol[®] Floor** must be thoroughly mixed using a low speed electric stirrer and it is important to stir the mixture thoroughly near the sides and bottom of the container. When parts A and B have been mixed, quartz sand M-32 is gradually added into the mixture under continuous stirring (for 3-5 minutes), in a proportion of 1:0,8-1,2 until a uniform epoxy mortar is formed. The epoxy mortar is then poured on the floor and levelled to the preferred thickness (1,5 up to 3mm) with a toothed spatula. (For greater thickness please communicate with Technical Department of NEOTEX). For avoiding bubbles on final surface, prefer a spiked roller when rolling the self-levelling layer after the use of the notched trowel.

Slip-resistant final surface Epoxol[®] Floor:

First, **Epoxol[®] Floor** is applied in the same way as in the smooth surface case. On the still fresh layer, quartz sand D50 260µm(M-32) is spread, depending on the required anti-slipping effect. After hardening, any loose grains should be removed using a high suction vacuum cleaner. Finally, a finishing sealing layer

Epoxol® Floor

of **Epoxol® Floor** is applied with roller and without the addition of quartz sand M-32.

Consumptions

Self levelling System:

- Proportion **Epoxol® Floor** – quartz sand D50 260µm(M-32) = 1:1
Consumption (per mm): 0,8kg/m² resin + 0,8kg/m² quartz sand D50 260µm(M-32)
- Proportion **Epoxol® Floor** – quartz sand M-32 = 1:0,8
Consumption (per mm): 0,9kg/m² resin + 0,7kg/m² quartz sand D50 260µm(M-32)
- Proportion **Epoxol® Floor** – quartz sand D50 260µm(M-32) = 1:1,2
Consumption (per mm): 0,7kg/m² resin + 0,9kg/m² quartz sand D50 260µm(M-32):

Slip-resistance surface:

- Spreading quartz sand D50 260µm(M-32) to the fresh self-levelling layer **Epoxol® Floor** with consumption 3-4kg/m², and consumption of **Epoxol® Floor** (finishing sealing layer) = 300-400gr/m²

Paint:

- **Epoxol® Floor** can be applied by roller as a paint in 2 layers.
Consumption: ~ 250-300gr/m²/layer.

Slip-resistance paint:

- Spreading quartz sand D50 260µm(M-32) to the fresh paint **Epoxol® Floor** with consumption 400-500gr/m², and consumption of **Epoxol® Floor** (finishing sealing layer) = 200-300gr/m²

Notes

- Low temperatures and high humidity during application prolong drying time, etc
- Allow at least 4 weeks to pass between casting new concrete structures and painting them with the product.
- Direct and continuous exposure to UV radiation can cause over time the chalking phenomenon.
- After stirring the whole mix (A+B+quartz sand), pour the mortar soon enough in order to prevent high temperature and polymerization inside the container.
- The substrate temperature must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish.

Variations

Epoxol® Floor Winter:

Special version of the product for application in highly humid environments and low temperatures (<12°C and >5°C, relative atmospheric humidity <80%, surface humidity content <4%).

Resistance to temperature (dry loading) from -30°C to +100°C.

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Cleaning of Tools	Use solvent Neotex 1021 immediately after application.
Stain Removal	Use solvent Neotex 1021 when the stain is still fresh and damp. In case of hardened stains, use mechanical means.
Colors	White (RAL 9003), Beige (RAL 1015), Grey (RAL 7035, RAL 7040), Terracotta (RAL 3009). Tailor-made shades can be produced for a minimum quantity, upon special arrangement.
Packing	Sets of 13,5kg in tin cans (components A&B have fixed weight proportion)
Storage Stability	2 years (5-45°C) in sealed tin cans.
Safety Precautions	See Safety Data Sheets.
Auxiliary Materials	Epoxol[®] Primer: Set 5kg, 10kg Epoxol[®] Primer SF: Set 10kg Neopox[®] Primer AY: Set 5kg Acqua[®] Primer: Set 7kg Solvent Neotex 1021: Tin cans 1kg, 5kg, 20kg Quartz sand D50 260µm(M-32): Bags 25kg

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Chemical Resistance			
	1 Hour (+20°C)	5 Hours (+20°C)	24 Hours (+20°C)
Phosphoric Acid (10%)	A	B	C
sulphuric acid (10%)	A	B	B
sulphuric acid (50%)	B	B	C
Hydrochloric Acid (10%)	A	B	B
Lactic Acid (10%)	A	B	B
Nitric Acid (10%)	A	D	D
Sodium hydroxide - caustic soda (10%)	A	D	D
Formaldehyde (10%)	A	A	A
Ammonia (10%)	A	A	A
Chlorine (5%)	A	A	A
Diesel (10%)	A	A	A
Gasoline	A	A	A
Xylene	A	A	A
M.E.K	A	A	A
alcohol 95°	A	A	A
saltwater 15%	A	A	A
Engine oil	A	A	A
Red wine	A	A	A

- (A) EXCELLENT RESISTANCE
(B) GOOD RESISTANCE (LIGHT DISCOLORATION)
(C) POOR RESISTANCE (INTENSE DISCOLORATION)
(D) NO RESISTANCE

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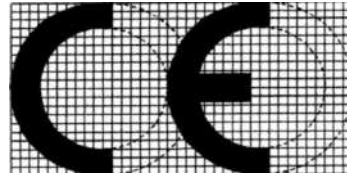
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Chemical Resistance	
	Permanently (+20°C)
Phosphoric Acid (15%)	B
sulphuric acid (15%)	A
Hydrochloric Acid (15%)	A
Lactic Acid (15%)	C
Nitric Acid (15%)	B
Sodium hydroxide - caustic soda (15%)	C
Formaldehyde (15%)	A
Ammonia (15%)	A
Chlorine (5%)	A
Xylene	D
saltwater 15%	A
Red wine	A

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17

Dop No. Epoxol Floor/4950-40

EPOXOL FLOOR

EN 13813 C 40-B2,0-A 12-IR4
Synthetic Resin screed material for use internally
in buildings

Essential characteristics	Performance
Impact Resistance	IR 4
Bond Strength	Class B 2,0
Liquid water permeability	< 0.1 kg/m ² h ^{0.5}
Compressive Strength	Class C 40
Surface Hardness	< 4
Wear Resistance	Class A 12
Reaction to fire	NPD

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 in order 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.