



Epoxol® Design

**Decorative self-leveling solvent-free epoxy system,
with a metallic effect**

Description

Solvent-free epoxy system, suitable for the creation of decorative self-leveling floors with a metallic effect.

It consists of the single-coloured **Epoxol® Design Base Coat** which is used as a base coat and **Epoxol® Design** which offers the metallic effect.



Fields of application

- Decorative floors of hotels, offices, exhibition areas
- Commercial and residential floors

Properties - Advantages

- Impressive aesthetic result
- High resistance to abrasion and scratching
- Remarkable hardness and durability
- Very good resistance to mechanical stress and chemicals
- Endless options of colour combinations which lead to unique creations

Packing

Epoxol® Design Base Coat

Set (A+B) of 13,5kg

Epoxol® Design

Set (A+B) of 4,05kg

Colours

Epoxol® Design Base Coat

White, Grey, Blue

Epoxol® Design

Aluminum, Gold

Technical characteristics

Mixing ratio A:B (by weight)	100:35 – Epoxol® Design Base Coat 100:35 – Epoxol® Design
Density Epoxol® Design Base Coat (EN ISO 2811-1)	1,29kg/L (±0,05)
Density Epoxol® Design (EN ISO 2811-1)	1,34 kg/L (±0,05)
Solids content by weight	~100%
Solids content by volume	~100%
Gloss (60°)	97
Abrasion resistance (Taber Test, CS 10/1000/1000,	81mg



ASTM D4060)	
Adhesion strength (EN 13892-8)	≥2,5N/mm ²
Hardness Shore D (ASTM D2240)	81
Impact resistance (EN ISO 6272)	≥4Nm
Scratch hardness (Sclerometer Test - Elcometer 3092)	8N
Resistance to temperatures (dry loading)	-30°C min. / +100°C max.
Consumption: 0,70-0,80kg/m² Epoxol® Design Base Coat + 0,20-0,30kg/m² Epoxol® Design	

Application conditions

Substrate moisture content	<4%
Relative air humidity (RH)	<70%
Application temperature (ambient - substrate)	+12°C min. / +35°C max.

Curing details

Pot life (+25°C, RH 50%)	40 minutes
Drying time (+25°C, RH 50%)	10 hours
Dry to recoat (+25°C, RH 50%)	24 hours
Full hardening	~ 7 days

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

Appropriate primers on concrete substrate

	Primer	Description - Details
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
Water-based	Acqua Primer	Two-component, water-based epoxy primer
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 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 the pourable epoxy-cement mortar **Epoxol® CM** and the epoxy putty **Epoxol® Putty**, or/and a mixture of **Epoxol® Primer SF-P** and Quartz Sand M-32 (indicative mixing ratio 1:1-2 w/w), 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 system, it is recommended to apply the solvent-free epoxy **Epoxol® Primer SF-P** 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 consumption of 0,3-0,5kg/m² for the sand. After drying, any loose grains should be removed with a high suction vacuum cleaner.

After the primer has dried, any further existing imperfections (holes, cracks) may be repaired locally using **Epoxol® Putty** in a ratio 2A:1B or 1A:1B w/w, depending on application conditions.

Application

Once the primer is dry to overcoat, the application of **Epoxol® Design Base Coat** follows. The mixture is applied by notched trowel in one layer of ~0,5mm thickness.

Prior to mixing, mechanical stirring of component A for 1 minute is recommended. This is followed by the addition of component B into component A in the predetermined ratio (100A : 35B w/w) and stirring of the two components for app. 3-5 minutes with a low speed electric stirrer. It is important to stir thoroughly both near the sides and at the bottom of the container, so that the hardener (component B) is evenly distributed. The mixture is then left for app. 1-2 minutes and then it is poured on the application surface.

During the application of the self-leveling coating on the floor, the thorough use of a special spiked roller is essential, in order to release any trapped air and create a smooth coating without bubbles and with an even distribution of sand in its mass. During this procedure, the use of spiked shoes is also required.



Soon after applying the base coat (and after its components have been mixed and stirred in the same way), **Epoxol® Design** is poured onto the still wet surface and applied (“wet-on-wet”), indicatively by making “S” movements on the surface towards various directions, using a smooth trowel or spatula. The final effect depends on the applicator.



Special notes

- **Epoxol® Design** should not be applied under wet conditions, or if wet conditions are expected to prevail during the application or the curing period of the product. Increased humidity may have a negative impact on the adhesion, the film properties and/or the final result (e.g. blurry surface, stickiness)
- 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 materials, the direct and permanent exposure of the final coating to UV radiation may cause the phenomenon of chalking over time. For that reason, the application on exterior areas is not recommended
- It is recommended that **Epoxol® Design** (which provides the metallic effect), is spread twice – once vertically and once horizontally - and it is not “moved” excessively, as the metallic effect will not be intense in such case
- The final effect of the floor depends on the creativity of the applicator



Maintenance instructions

- In case of minor spills and stains, it is recommended to remove them as soon as possible by using a soft cloth along with warm clean water (temperature <+60°C)
- For the maintenance cleaning of the surface from dust and dirt, it is recommended to use a vacuum cleaner or a soft bristle broom. The use of hard brushes or wires to remove the stains should be avoided.
- For cleaning the surface from hardened stains, it is recommended to use a hard foam mop with a solution of water and ammonia (~3% dilution). Then, rinse off with clean warm water (temperature <+60°C) and dry the surface with a soft towel.
- In case of using commercial cleaning products, the use of neutral ones is recommended (pH between 7 and 10). Soaps or all-purpose cleaners containing water-soluble salts or harmful ingredients with high concentration in alkalis or acids should be avoided. Follow the manufacturer's recommendations with respect to the optimum dilution with water. In any case, the first time a commercial cleaning product is used, it is recommended that a trial is made in a small surface area.

Appearance (cured)	Glossy
Colours	Epoxol® Design Base Coat: White, Grey, Blue – Tailor-made shades available upon special arrangement Epoxol® Design: Aluminum, Gold
Packing	Epoxol® Design Base Coat: Set (A+B) of 13,5kg Epoxol® Design: Set (A+B) of 4,05kg
Cleaning of tools – Stains removal	By Neotex® 1021 immediately after application. In case of hardened stains, by mechanical means
Volatile organic compounds (V.O.C.)	V.O.C. limit acc. to the E.U. Directive 2004/42/CE for this product of category AjSB: 500g/l (Limit 1.1.2010) - V.O.C. content of the ready-to-use product <500g/l
UFI code	Epoxol® Design Base Coat - Component A: END0-N0QR-W00W-28EK Epoxol® Design Base Coat - Component B: GTD0-P03J-H00V-DXKQ Epoxol® Design - Component A: JJ10-C0PJ-E002-R788 Epoxol® Design - Component B: 5QD0-50E5-700D-RM0N
Storage stability	2 years, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight



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