



TWO-COMPONENT LOW EMISSION EPOXY COATING FLOORS FOR CLEAN ROOMS.



PRODUCT DESCRIPTION

Epofloor CLN is a two-component, fillerized epoxy resin-based formulation with high solids content and is used to form seamless, self-leveling coatings specific for clean rooms, and with good resistance to microorganisms. Epofloor CLN is also characterised by its good mechanical strength and good resistance to chemicals and abrasion. Epofloor CLN meets the requirements defined in EN 13813, which specifies the requirements for screed materials used for internal floors, the requirements of EN 1504-9 and the minimum requirements of EN 1504-2.

FIELD OF APPLICATION

Epofloor CLN is a two-component, colored epoxy formulation with high solids content used to form smooth, self-leveling coatings on industrial floors. Once hardened, Epofloor CLN is characterized by the very low level of micro-particles and volatile organic compounds (VOC) it releases into the air. This characteristic makes it ideal for coating floors in areas such as clean rooms, where a very high standard of hygiene is required and where the size and concentration of dust particles and suspended micro-particles need to be monitored. Epofloor CLN, can maintain a

close control on potential biological and physical pollutants that could affect processes in various sectors of industry, such as:

- food and drinks;

- electronics;
- hospitals and operating theatres;
- optical;
- nano-technology;
- pharmaceutical, etc.

SUITABLE SUBSTRATES

- Concrete
- Cement Mortar
- Ceramic Tile and Stone primed with Grip Primer

LIMITATIONS

- Do not apply on damp substrates or on substrates with capillary rising damp
- Do not dilute with solvent or water.
- Do not apply on crumbling substrates.
- Do not apply on substrates with oil or grease stains or dirt in general.
- Only apply on substrates which have been prepared according to specification.
- Do not mix partial quantities of the components because the product may not harden correctly.
- Do not expose the mixed product to sour-

ces of heat.

- Epofloor CLN may change color or fade if exposed to sunlight but no effect on the performance.
- The coating may also change color if it comes into contact with aggressive chemicals.
- Do not apply on concrete within 10 days of pouring.
- Do not apply on ceramic substrates or stone in general.
- Remove aggressive chemicals as soon as possible if they come into contact with Epofloor CLN.
- Use suitable specific cleaning equipment and detergent to clean the coating.
- Protect coatings from water for at least 24 hours after application.
- The temperature of the substrate must be at least 3°C higher than the dew-point temperature.

APPLICATION PROCEDURE

A) Preparation of the substrate

The surface of concrete floors must be dry, clean and sound and have no crumbling or detached areas. The compressive strength of the concrete used for the substrate must be at least 25 N/mm² and its tensile strength must be at least 1.5 N/mm². The strength of the substrate must also be suitable for its final use and the types of load to which it will undergo. The level of moisture in the substrate must be a maximum of 4% and there must be no capillary rising damp. The surface of the floor to be treated must be prepared with a suitable mechanical process to remove all traces of dirt, cement laitance and crumbling or detached portions, and to make the surface slightly rough and absorbent. Before applying the product remove all dust from the surface with a vacuum cleaner. Any cracks must be repaired by filling them with Epoinject, whi-

le any deteriorated areas in the concrete must be repaired epoxy mortar. Apply primer as is or mixed with Quartz 0.5 on the substrate after it has been prepared as specified with a straight trowel or a rake. Immediately after applying primer, lightly broadcast the surface while still wet with Quartz 0.5 at a rate of 0.5 kg/m²; we advise against exceeding this consumption rate. Make sure there are no open pores in the surface of the substrate, otherwise air bubbles could escape and form small craters or pinholes in the self-leveling finishing coat.

B) Preparing the product

The two components which make up Epofloor CLN must be blended together just before application. Mix component A thoroughly and add the contents of component B. Add around 30% by weight of Quartz 0.25 and mix again with an electric mixer at low-speed to prevent entraining air into the mix (300-400 revs/min), for at least 2 minutes until the mix is completely blended. Pour the mix into a clean container and briefly mix again. Do not mix the product for too long to avoid entraining too much air into the mix. Apply the mix within the pot life indicated in the data table (refers to a temperature of +20°C). Higher surrounding temperatures will reduce the pot life of the mix, while lower temperatures will increase its pot life.

C) Applying the product

Pour Epofloor CLN on the surface of the floor and spread it out evenly with a smooth or notched trowel with "V" shaped. Using a notched trowel allows the thickness of the layer and the consumption rate of the product to be controlled more easily. Go over the surface with a spike roller several times while the product is still wet to even out the thickness of the coat and to remove any air entrained into the product during mixing.

COVERAGE / CONSUMPTION

The consumption is approximately 1.5-1.7 kg/m² at 1 cm thickness.

PACKAGING

Epofloor CLN is supplied in:
– 20 kg buckets A+B

SHELF LIFE-STORAGE

Original sealed bags of this product are guaranteed to be of first quality for 24 months if stored off of the ground in a dry area. High humidity will reduce the shelf life of the bagged product.

SAFETY INSTRUCTION

Epofloor CLN component A is irritant for the eyes and skin, both component A and component B may cause sensitization when in contact with the skin of predisposed subjects. Epofloor CLN component B is corrosive, it may cause burns and damage to the eyes. The product contains low weight molecular epoxy resins, which may cause sensitization if cross-contamination with other epoxy compounds occurs. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. When the material reacts it generates a high amount of heat. We recommend applying the product as soon as possible after mixing components A and B and to never leave the container unattended until it is completely empty. Furthermore, Epofloor CLN component A and component B are dangerous for aquatic life. Do not dispose of them in the environment. For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet. RESTRICTED TO PROFESSIONAL USERS.

TECHNICAL DATA

TECHNICAL DATA (typical values)

	component A	Component B
Color	RAL colour	Straw yellow
Consistency	Liquid	Liquid
Density (g/cm ³)	1.60 ÷ 1.70	1
Brookfield viscosity (mPa·s)	4500 ÷ 6500 (# 5 - 50 rpm)	250 ÷ 450 (# 2 - 50 rpm)
Application data (at +23°C and 50% R.H.)		
Mixing ratio	100	25 parts by weight
Colour of mix	coloured	
Consistency of mix	viscous	
Viscosity of mix at +23°C (mPa·s)	1200 ± 200 (# 3 - 20 rpm)	
Density of mix (kg/m ³):	1,400	
Workability time at +20°C	30 mins.	
Application temperature	+8 to +35°C	
Final performances		
Hardening time at +23°C and 50% R.H.:		
– dust dry:	3-5 hours	
– set to foot traffic:	24 hours	
– complete hardening time:	7 days	
Shore D hardness (DIN 53505) after 7 days at +23°C and 50% U.R.:	75	
Compressive strength after 7 days (EN 196-1) (N/mm ²):	52	
Flexural strength after 7 days (EN 196-1) (N/mm ²):	20	
BCA resistance to wear: EN 13892- 4	< 5 µm	
Adhesion strength: EN 13892- 8; 2004	3.90 N/mm ²	
Impact strength: EN ISO 6272	20 Nm	



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