Superbase
Crystal

Product description

EPI Superbase Crystal is a durable and comfortable polyurethane self-levelling flooring system that contains a high percentage of specially formulated biopolymers and natural fillers. The flooring system has permanent elastic properties, is UV-resistant and color stable. EPI Superbase Crystal has a particularly decorative and unique appearance due to its mineral fillers. The floor coating system has a smooth, seamlessly tight finish and is extremely suitable for use in an environment where high walking comfort and exclusive design are important.

Product features

- Seamless
- Comfortable and ergonomic
- Solvent free and environmentally friendly
- Resistant against intensive foot traffic
- Contact noise-reducing properties
- Easy to clean and to maintain

Application areas

- Living spaces
- Retail & Showrooms
- Hotels & Office spaces
- Lobby's
- Entrance halls
- Restaurants

Technical information

Thickness	2 - 3 mm
Density	~ 1.54 g/cm^3
Impact resistance	Class I: ≥ 4 Nm
Pull-off strength	≥ 1.5 N/mm^2
Hardness Shore	~ D 50 ± 5
Wear resistance CS^{10}	≤ 40 mg
VOC content, EU-limit cat. A/j	≤ 500 g/l
Giscode	PU 40
Reaction to Fire	C_{fl}-S^1
Solids	100 %
Mixing ratio	Comp. A : B = 100 : 30
General application conditions	Material-, substrate-, and ambient temperatures between 15°C and 25°C and min. 3°C above dewpoint
Optimal application conditions	Material-, substrate-, and ambient temperatures between 18°C and 22°C
Relative humidity	Maximum 70% RH
Application time	Approx. 20 - 25 minutes at 20°C
Foot traffic/ overlayment	After approx. 16 hours at 20°C and 65% RH, next layer within 24 hours
Mechanical loads	After approx. 72 hours at 20°C and 65% RH
Fully loadable	After approx. 7 days at 20°C and 65% RH

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual floor system, including binder and filler, were used as test specimens. All sample preparation and testing is conducted in a laboratory environment, values obtained on field applied materials may vary.

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Sustainability

EPI Superbase systems have been assessed to meet the requirements of the Indoor Air Quality standards as specified below. When applying the criteria for EMICODE, classification in the EMICODE EC1 category would be possible.

Regulation or Protocol	Classification
AFSSET VOC (French A+)	PASS
Belgische VOC	PASS
AgBB/ABG	PASS
Italiaanse CAM Edilizia	PASS
EU Ecolabel	PASS
Indoor Air Comfort Gold	PASS
RTS M1 (Finland)	PASS
CDPH	PASS
BREEAM International	Exemplary Level
LEEDv4.1	PASS
DGNB	PASS

LEED v4 – BREEAM – DGNB

LEED, BREEAM & DGNB are preeminent programs for the design, construction, maintenance and operations of high performance "Green Buildings". EPI Superbase floor systems conform to the following criteria:

LEEDv2009	:	MRc6 Renewable materials
LEEDv2009	:	IEQc4.3 Low emitting materials
BREEAM	:	HEA 02 Indoor Air Quality
BREEAM	:	HEA 09 Indoor Air Quality
DGNB	:	ENV 1.2 Local Environmental Impact
	-	Indicator 20 – Quality level 4
	-	Indicator 24 – Quality level 4

Colors

EPI Superbase Crystal is available in a range of standard colors, other colors are upon request.

Packaging

EPI Superbase Crystal is available in the following packaging units;

EPI Superbase Crystal, set 15 kg

- Superbase Crystal, comp. A : 10,5 kg
- Superbase NV, comp. B : 3,0 kg
- Superbase Crystal, comp. C : 1,5 kg

EPI Superbase Crystal, set 28 kg

- Superbase Crystal, comp. A : 19,8 kg
- Superbase NV, comp. B : 5,7 kg
- Superbase Crystal, comp. C : 2,5 kg

Theoretical coverage

EPI Superbase Crystal
Usage: approx. 1.54 kg/m^2/mm thickness, apply minimum 2.8 kg/m^2.

Example build-up flooring system:

- Primer Aquapox-N : 0,15 – 0,25 kg/m^2
- Primer 400 POX : 0,7 – 1,5 kg/m^2
- Superbase Crystal : 2,8 – 3,0 kg/m^2
- Superbase Crystal mix : ~ 0,3 kg/m^2
- Hardtop 200 T WA/PU* : 0,08 – 0,1 kg/m^2

* Usage based on 1 coat.

Substrate preparation

In general, the substrate must fulfil the relevant standards with special reference to flatness, gradients, thickness, load bearing capacity and water permeability. Substrates to be coated have to be firm, dry, clean and free of loose and brittle particles and substances that impact the adhesion such as oils, grease, paint or other contaminations. Concrete substrates must be dry and a require a minimum cohesion strength of 1.5 N/mm^2 and a minimum compressive strength of 25 N/mm^2 at time of installation. Existing joints in the concrete surface must be performed with a joint profile. The dimensions and details of these joints will need to be determined based on the function of the expected movements of the concrete floor. Depending on the substrate a mechanical preparation (milling and/or vacuum blasting) is recommended for a good adhesion.

Residual moisture tolerance

Mineral substrates must always be provided with a vapor barrier and must not exceed 4 % decreasing residual moisture content measured by the Calcium Carbide method. For anhydrite substrates may contain a maximum of 0.3 % decreasing residual moisture content before the floor system can be applied.

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Work safety precautions

Before using the products, the user must read the associated, current Material Safety Data Sheets (MSDS). The MSDS provides information and instructions for the safe use, handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety related data. Please refer to the Material Safety Data Sheets for detailed safety instructions for use of the use of personal protective equipment during the processing of the materials. The Safety Data Sheet applies to the components A and B. These sheets have been drawn up in accordance with the latest European legislation.

Application EPI Superbase Crystal

General:

- Before installation, always check all relevant documentation and check that all components are present in the required quantities.
- Large temperature differences should be avoided as this can adversely affect the end result.
- The area must be wind and watertight: avoid drafts and penetration of moisture, dust, water, etc..
- Preferably remove doors that have no free space. Protect walls, columns and walls from splashes.
- Retain the floating character of floating screeds.

System options:

Sound reduction:
To reduce contact noise, the EPI Superbase Crystal can be installed with a special sound-absorbing underlay, which can provide up to 20 dB of sound reduction.

Crack-bridging properties:
If the total system needs to be static crack-absorbing, please contact the EPI technical service department to discuss the possibilities.

Slip-resistance:
Superbase Crystal can be installed with a light surface texture, which creates more grip.

Coving detail:
A sanitary plinth ca be formed at the junction of wall and floor to be incorporated into the floor system. EPI Trowel POX Mortar can be used for this detail and formed in desired height. See product data sheet for more information.

For specific questions and/or details regarding noise reduction, crack-bridging and slip-resistance, etc. please contact one of our advisers or the EPI technical service department.

Application primer / scratch coat:

Prior to the application of the EPI Superbase Crystal, the substrate must be primed with a primer / scratch coat. EPI Primer 500 POX-NF or EPI Primer Aquapox-N (option for absorbent substrate) in combination with EPI Primer 400 POX can be used for this purpose. See product data sheet of these products for more information.

Processing EPI Superbase Crystal

- Always mix whole packs!
- If processing time, project size and mixing equipment allow, double sets may be used.
- Step 1: Thoroughly mix components A and B together for about 2 minutes with a suitable mixer to a uniform homogeneous material, with attention to mixing on the bottom and on the edges.
- Pour the mixture into a clean container and mix thoroughly again for about 1 minute.
- Step 2: Immediately after mixing, distribute the material on the floor. The material can be applied in the desired layer thickness with a flat trowel or floor squeegee with adjustable pins on both sides. When applying "blend" colors, use the smoothing trowel to create the "blend" drawing.
- Step 3: After the floor has levelled out, sprinkle it sparingly and evenly with the broadcast comp. C, Superbase Crystal mix. Consumption approx. 300 gr/m^2. The floor can only be broadcast after 30-45 minutes.
- Clean tools immediately after use.
- Use clean spike shoes if desired and necessary (attention: do not walk through broadcasted floors).

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Note: Deviating material-, substrate-, and environmental conditions may give visible markings in the poured layer due to the characteristic processing techniques.

Consult the EPI Superbase Crystal installation guidelines for more information.

Application topcoat / sealing finish

EPI Superbase Crystal floor should be finished with a transparent, UV-resistant polyurethane sealer. The products that can be used for the transparent sealer are EPI Hardtop 100 T/M or EPI Hardtop 200 T WA/PU.

The floor finish results in a matted appearance and offers extra protection against discoloration. See the product data sheet of these products for more information.

Transport and storage conditions

Store all components in closed packaging, away from the ground. Temperature between +15°C and +25°C. Dry room, avoid direct sunlight. Protect liquid components against frost (also during transport).

Shelf life

Component A : 6 months from production date.
Component B : 6 months from production date.

Cleaning and maintenance

In order to maintain an optimal skid resistance, regular cleaning is required.

Cleaning tools

Clean all tools and equipment immediately after use with scouring pads and warm, soapy water or mineral cleaners. Cured material requires mechanical removal.

Waste

Attention! Too much residual material in the packaging can become hot due to an exothermic reaction and cause smoke nuisance. Therefore never leave more than 100 grams of mixed product in the packaging and place the packaging in a safe and well-ventilated place. If there is more residual material, add a generous amount of sand to inhibit the exothermic reaction.

CE-marking

The harmonized European standard EN 13813:2002 is applicable for the use of synthetic resin bonded floor systems for use in buildings and structures. See the declaration of performance for more information.

VOC / Directive 2004/42/CE

EU limit value for the product (category AII / j / type SB) in ready-to-use condition: max. 500 g/l (2010). This product contains < 500 g/l VOC.