

C-Guard® concrete floor system

C-Guard PU 330

Two-component polyurethane self-levelling topcoat

Intended use

C-GUARD® PU 330 is a self-levelling two-component polyurethane topcoat that produces smooth, strong yet elastic floors for surfaces exposed to medium to heavy chemical and mechanical loads. It exhibits virtually no shrinkage during curing.

Thanks to its elasticity, C-GUARD® PU 330 offers particular advantages on softer substrates such as mastic asphalt, laminated boards, parquet and metal surfaces. It provides satisfactory resistance to chemicals, fuels, water, weak alkalis and acids. Its resistance to organic acids is particularly high compared with epoxy floors.

Due to its special formulation, it is suitable for indoor use only, as it yellows when exposed to UV radiation.

Properties

- Solvent-free
- Smooth, coloured surface
- Permanent elasticity
- Good chemical and mechanical resistance
- Ready to use

Areas of use

- Flooring on softer substrates such as mastic asphalt, steel, wood and various coatings
- Surfaces exposed to medium to heavy chemical and mechanical loads
- Abrasion-resistant coating for sealing and levelling.

Technical data

Property	Value and conditions
Packaging — A	10 kg 20 kg
Packaging — B	2.5 kg 5 kg
Mixing ratio — By weight	A : B = 100 : 25
Mixing ratio — By volume	A : B = 80 : 20
Pot life	10 °C: 45 minutes 20 °C: 30 minutes 30 °C: 15 minutes
Application temperature	Minimum 10 °C (air and substrate temperature)
Application humidity	Minimum 30 and maximum 75% relative air humidity
Drying time (foot traffic)	10 °C: 24 - 36 h 20 °C: 18 - 24 h 30 °C: 12 - 14 h
Drying	2-3 days at 20 °C for mechanical loading

Property	Value and conditions
Drying	10 days at 20 °C for chemical resistance
Subsequent coats	On a dry substrate (18-24 hours),
Subsequent coats	No later than 48 hours at 20 °C
Consumption — Topcoat	approx. 1.45 kg/m ² for 1 mm thickness
Appearance	RAL and NCS colour ranges; gloss
Viscosity — Components A+B	900 - 1.000 · mPas · DIN EN ISO 3219 (23 °C)
Solids content	> 99 · Wt. %
Density — Components A+B	1.45 ± 0.05 · g/ml · DIN EN ISO 2811-2 (20 °C)
Elongation	21 · %
Taber abraser — 1kg, H 18, 1000 cycles	1.9 · mg · ASTM D4060
Adhesion to concrete	> 1.5 · N/mm ² · DIN EN 1542
Shore D hardness	65 · After 1 day · DIN 53505

(*All technical data stated in this technical data sheet are based on laboratory tests. Actual data may vary depending on application conditions beyond our control.)

Substrate

The surface (min. 10°C) must be dry (below 3% CM), clean, free from dust particles and grease stains, and suitably levelled. We recommend treating the substrate with C-Guard® EP 120 or EP 152 primer, depending on the substrate and application conditions. The substrate must be ground before application. A diamond-segment grinding disc or a shot-blasting machine is suitable. Friable concrete and cement laitance must be completely removed by grinding. Dust and other ground-off material must be vacuumed away before applying the product.

If the substrate is not completely sealed, craters or bubbles may form in the finished floor.

The substrate must have sufficient tensile and compressive strength and must not be friable. Contaminants that prevent adhesion, such as grease, oil or paint residues, must be removed using suitable methods. The substrate must be sufficiently sound for its intended use. The surface strength must be at least 1.5 N/mm².

Mixing

Before use, warm both containers to room temperature (20°C, minimum 15°C). The mixing ratio is 100:25 by weight, and the pot life is approximately 30 min (20°C and normal working conditions). Do not apply the coating after its pot life has expired, as problems with adhesion, drying or gloss may occur.

Add component B to component A in the specified ratio and mix thoroughly with an electric mixer for 2-3 min at low speed (300-400 min-1). To avoid mixing errors, we recommend transferring the mixture to a clean container and briefly mixing it again.

Application and use

We recommend C-Guard® EP 120 or EP 152 as the primer, depending on the substrate and application conditions.

For levelling rough surfaces, we recommend C-Guard® EP 120, EP 152 or PU 330 mixed with fillers.

Apply C-Guard® PU 330 with a notched trowel or a metal or plastic float. We recommend using a spiked roller for deaeration.

The air and substrate temperature must not be below 10°C and/or the relative humidity above 75%. The temperature difference between the air and substrate must be less than 3°C to avoid disrupting drying. Reaching the dew point can cause poor adhesion, drying problems or local defects (surface marks). Drying times refer to 20°C; lower temperatures extend drying time and pot life, while higher temperatures shorten them.

Thinning is not permitted. Alcohols or other solvents may affect curing.

Cleaning tools and surfaces

Clean tools and equipment immediately after use with C Guard thinner. Cured material can only be removed mechanically.

Storage

The shelf life of the product in tightly closed, undamaged original packaging, stored in a dry place at temperatures between +10°C and +25°C, is 12 months from the date of manufacture.

Notes

All technical data stated in this technical data sheet are based on laboratory tests. Actual data may vary depending on application conditions beyond our control.

Do not apply materials to permanently damp surfaces. Fresh material must be protected from moisture, condensation or water for at least 24 hours after application. For outdoor applications, apply when the substrate temperature is falling. Application to a warming substrate may cause pinholes in the film due to rising air. Under certain conditions, high temperatures from the floor (underfloor heating) or surroundings may affect the surface appearance. If the air and substrate need heating, do not use heaters that emit large amounts of CO₂ or moisture (gas, paraffin or other fossil-fuel heaters), as these may damage the floor surface. Use electric heaters only.

Protective measures

- Forced ventilation must be provided when applying in enclosed, unventilated areas. The material must not be applied near open flames or welding operations.
 - Wear protective equipment during work, including gloves, goggles and other necessary protection.
 - Change contaminated clothing and wash hands before eating and after finishing work.
 - Follow the safety warnings on the packaging label.
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Important warnings

- Both components must be acclimatised to the working environment for at least 24 hours before use.
- The same colour may have a different shade in different product types. This must be taken into account when carrying out work where colour uniformity is very important. Adjacent work areas must therefore always be continued using the same production batch (check the batch number on the label) and the same product type. For subsequent deliveries to the same site, always state the batch number from the previous order as well as the colour code.
- Transport is permitted only at temperatures above 5°C; otherwise the vehicle must be heated.
- Uncured or unbound material must be disposed of in accordance with legal regulations. Fully cured material may be disposed of at municipal landfill sites in accordance with legal regulations.
- Detailed safety precautions and physical, toxicological and ecological product data are provided in the safety data sheet, available from the Chemcolor sales department or at www.chemcolor.si.

These data are based on our experience to date and careful research. Site conditions and knowledge of the work itself affect application quality. Success depends on professional assessment of the substrate at handover and practical experience in selecting the appropriate product. When working, please also follow the finish manufacturer's recommendations and the safety data sheet for this product.