

C-Guard® concrete protection system

C-Guard D-CAST 504

Two-component transparent epoxy casting compound – THICK LAYERS 50 mm

Intended use

C-Guard D-CAST 504 is primarily used as a solvent-free two-component epoxy binder. It is particularly suitable for casting thick layers with high transparency because it offers low exothermicity and a very low tendency to yellow. Despite its very long pot life, the binder provides good mechanical properties. The product is suitable for casting layers up to 50 mm thick.

Properties

- no unpleasant odour
- excellent mechanical properties
- high hardness
- long service life
- contains no benzyl alcohol or alkylphenols

Areas of use

- wood composites
- decorative coatings
- floor coverings
- jewellery making

Technical data

Property	Value and conditions
Packaging — A	0.5 kg 10 kg
Packaging — B	0.2 kg 4 kg
Mixing ratio — By weight	A : B = 100 : 40
Mixing ratio — By volume	A : B = 91 : 41
Pot life 500 g of mixture	15 °C: 8 hours 20 °C: 7 hours 25 °C: 5 hours
Application temperature	Minimum 16 °C (air and substrate temperature)
Application humidity	Minimum 30 and maximum 75% relative air humidity
Drying time Depending on thickness	16 °C: 30 h 20 °C: 24 h 25 °C: 22 h
Viscosity	Mixture – approx. 300 mPas
Colour	Transparent
Solids content	approx. 100 %

Property	Value and conditions
Density	Component A 1.10 g/ml Component B 0.97 g/ml · Mixture 1.06 g/ml EN ISO 2811-2 20°C
VOC content	product contains: 0 g/l

(*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. 16°C) must be dry and clean, free from dust particles and grease stains. 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.

For further advice, contact the Chemcolor technical department.

Mixing

Before use, warm both containers to room temperature (20°C, minimum 15°C). The mixing ratio is 10:4 by weight, and the pot life is approximately 7 hours (20°C and normal working conditions).

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). After mixing components A and B, pigments, sand or fillers may be added as required. Mix for 2 minutes until homogeneous. Do not mix excessively, to avoid introducing too much air.

To avoid mixing errors, we recommend transferring the mixture to a clean container and briefly mixing it again.

Application and use

Degas the cup under vacuum or tap it against a surface to release air from the compound. Pour into the prepared mould or board and wait 24 hours for the compound to harden. Then sand the surface, first with coarse sandpaper and finally with fine wet sandpaper, and polish it with polishing compound.

The air and substrate temperature must not be below 16°C and/or the relative humidity above 75%. The temperature difference between the air, coating 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.

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 epoxy materials to permanently damp surfaces. Fresh epoxy 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.

Important warnings

- 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.