

C-Guard® system for concrete flooring

C-Guard EP 120

Two-component colourless epoxy primer

Usage and Properties

C-GUARD® EP 120 is a two-component, solvent-free, colourless epoxy primer. It is used to prepare concrete surfaces, screeds and levelling compounds with adequate compressive and flexural strength. It cures very well at low temperatures down to 8°C and becomes insensitive to moisture after a short curing time.

Highlights

- Good sealing of substrate pores
- Excellent penetration
- Fast curing
- Excellent chemical resistance
- Solvent-free

Field of application

- Primer for subsequent coats. Can be applied to damp substrates below 4.0% CM.
- Strengthening of weak substrates
- Anti-abrasion coat for sealing and levelling

Technical properties

Property	Value and conditions
Packaging — Comp. A	10 kg 20 kg
Packaging — Comp. B	5 kg 10 kg
Mixing Ratio — Parts by weight	A : B = 100 : 50
Mixing Ratio — Parts by volume	A : B = 100 : 54
Pot life	8 °C: 40 minutes 20 °C: 23 minutes 30 °C: 15 minutes
Processing	Minimum 8°C (air and substrate temperature)
Processing — Humidity	Minimum 30 % and maximum 75 % RH
Drying time (walkable)	8 °C: 20 - 24 h 20 °C: 12 - 14 h 30 °C: 8-10 h
Curing	2-3 days at 20 °C for mechanical load
Curing	10 days at 20 °C for chemical resistance
Further Coatings	On a dry substrate after 24 hours at 20°C
Further Coatings	No later than 48 hours at 20°C

Property	Value and conditions
Consumption — Primer	Approx. 0.3 - 0.4 kg/m ²
Consumption — Antiabrasion Coat	Approx. 0.4 - 0.6 kg/m ²
Viscosity — Comp. A+B	~500 · mPas · DIN EN ISO 3219 (23 °C)
Solid Contents	100 · weight-%
Density — Comp. A+B	1.088 · g/ml · DIN EN ISO 2811-2 (20 °C)
Tensile strength	95 · MPa · DIN EN 196/1
Compressive strength	60 · MPa · DIN EN 196/1
Bond Strength	> 1.5 · MPa · DIN EN 1542
Shore-Hardness D	81 · after 7 days · DIN 53505

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

Preparation of substrate

The substrate must be at least 8°C, dry (below 4% CM), clean and free of dust and grease. It must have adequate tensile and compressive strength, must not be friable and must be sufficiently strong for its intended use. Remove adhesion-reducing contaminants, such as grease, oil and paint residues, using suitable methods.

Grind the substrate before application using a diamond-segment disc or a shot-blasting machine. Completely remove friable concrete and cement laitance. Vacuum all dust and removed material before application. Surface strength must be at least 1.5 N/mm². The possibility of moisture ingress from below must be permanently excluded.

Adhesion on inadequately strong substrates may be improved by the product's strong reinforcing properties; a test is required. Contact Chemcolor technical support for further advice.

Preparation of material

Before use, warm both containers to room temperature (20°C, minimum 15°C). The mixing ratio is 2 : 1 by weight. Pot life is approximately 23 minutes at 20°C under normal working conditions.

Add component B to component A in the specified ratio and mix thoroughly for 2-3 minutes with a low-speed electric mixer (300-400 rpm). To avoid mixing errors, transfer the mixture to a clean container and mix briefly again.

After mixing components A and B, add sand or fillers if required and mix for 2 minutes until homogeneous. Avoid excessive mixing to minimise air entrainment.

Application of material

Primer: Apply immediately after mixing with a spatula, trowel or roller. Use a spiked roller for uniform application and de-aeration. On highly absorbent substrates, an additional coat or a fully broadcast anti-abrasion coat is recommended to seal the substrate and prevent absorption of subsequent coats. Broadcast 0.8 kg/m² of quartz sand (0.3-0.8 mm) onto the fresh coat for optimum adhesion. This is mandatory if the next coat will be applied more than 24 hours later. Apply two coats on damp substrates. Only the second coat may be broadcast with sand.

Antiabrasion coats:

C-GUARD® EP 120 1.0 kg

C-GUARD® SAND 0.5 - 0.8 kg

Premix component A before adding sand. The amount of sand depends on the desired finish. Apply with a notched trowel or a metal or plastic float. Adjust the mixture viscosity to the substrate's absorbency so the material can penetrate the substrate.

Air and substrate temperatures must be at least 8°C and relative humidity must not exceed 75%. The temperature difference between substrate, coating and air must be less than 3°C to avoid disrupting drying. Dew-point conditions may impair adhesion and

drying or cause spots on the surface. Drying times refer to 20°C; lower temperatures extend and higher temperatures shorten drying time and pot life.

Cleaning of tools and surfaces after use

Clean tools and equipment immediately after work with C-Guard® thinner. Hardened material can only be removed mechanically.

Storage of material

Shelf life is 12 months from the date of manufacture in tightly sealed, undamaged original packaging, stored in a dry place at +10°C to +25°C.

Remarks

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

Do not apply epoxy materials to constantly damp surfaces. Protect freshly applied epoxy material from moisture, condensation and water for at least 24 hours after application. Outdoors, apply while the substrate temperature is falling. Application to a warming substrate may cause pinholes due to rising air. Under certain conditions, high temperatures from underfloor heating or the surroundings can affect the surface appearance. If the air and substrate need heating, do not use heaters that release large amounts of CO₂ or moisture, such as gas, paraffin or other fossil-fuel heaters, as these can damage the surface. Use only electric heaters.

Safety information

- Provide forced ventilation when applying the material in enclosed, unventilated spaces. Do not apply near open flames or welding.
- Wear protective equipment, including gloves and goggles, during work.
- Change contaminated clothing and wash your hands before eating and after work.
- Observe the safety warnings on the packaging label.

Important notice

- Dispose of uncured or unbound material in accordance with applicable regulations. Fully cured material may be disposed of at municipal landfills in accordance with applicable regulations.
- Detailed safety precautions and physical, toxicological and ecological data are provided in the safety data sheet, available from Chemcolor sales or at www.chemcolor.si.

The harmonised European standard EN 13813, "Screed material and floor screeds - Screed materials - Properties and requirements", specifies requirements for materials used in indoor floor construction.

	
Chemcolor Sevnica d.o.o. Dolnje Brezovo 35 8290 Sevnica-SLO	
EN 13813-SR-B2.0-AR0.5	
Synthetic resin screed/coating for indoor areas (apply according to the technical data sheet)	
Fire behaviour:	Efl
Release of corrosive substances:	SR
Water permeability:	NPD
Abrasion resistance according to BCA:	AR 0.5
Adhesive tensile strength	B 2.0
Resistance to impact:	NPD
Impact sound insulation:	NPD
Sound absorption:	NPD
Thermal insulation:	NPD
Chemical resistance:	NPD

NPD = No Performance Determined

This information is based on our experience to date and careful research. Site conditions and knowledge of the work affect the quality of application. Successful results depend on a professional assessment of the substrate before work begins and practical experience in selecting the appropriate product. Please also follow the recommendations of the manufacturer of the final covering and the safety data sheet for this product.