

C-Guard® system for concrete flooring

C-Guard EP 272 W HT

Two component epoxy breathable coating, with high hot tyre resistance

Usage and Properties

C-Guard® EP 272 W HT is a two-component, waterborne, vapour-permeable epoxy coating for concrete with high resistance to hot-tyre marks.

The coating has very good UV resistance for an epoxy system. Prolonged exposure to UV radiation can cause the surface to chalk over time. Its high resistance to hot-tyre marks makes it particularly suitable for vehicle-trafficked floors in garages, car parks, vehicle-repair workshops and warehouses. The wet surface is non-slip. Its high temperature resistance (130°C) makes it particularly suitable around ovens in bakeries.

Highlights

- Good mechanical resistance
- Good resistance to weak bases and acids, water, petrol and motor oils
- Non slippery when wet
- Water vapour permeable
- Highly resistant to hot tyre marks
- Environmentally friendly waterborne coating
- No unpleasant odour

Field of application

- Two-coat floor system for workshops, garages and warehouses; highly resistant to hot-tyre marks
- Excellent adhesion to damp substrates up to 6% CM and high vapour permeability

Technical properties

Property	Value and conditions
Packaging — Comp. A	1 kg 5 kg 25 kg
Packaging — Comp. B	0.2 kg 1 kg 5 kg
Mixing Ratio — Parts by weight	A : B = 100 : 20
Mixing Ratio — Parts by volume	A : B = 100 : 26
Pot life (max. allowed)	12 °C: 80 minutes 20 °C: 60 minutes 25 °C: 40 minutes
Processing	Minimum 12°C (room- and floor-temperature)
Processing — Humidity	Minimum 30% and maximum 85% RH
Curing Time (Accessibility)	12 °C: 16 - 24 h 20 °C: 8 - 12 h 25 °C: 5 - 6 h
Curing	4 days at 20 °C for mechanical load

Property	Value and conditions
Curing	10 days at 20 °C for chemical resistance
Further Coatings	After 24 hours at 20 °C
Further Coatings	but no longer than 72 hours at 20 °C
Consumption — Smooth surface	cca. 0.12-0.18 kg/m ² per coat
Consumption — Rough surface	cca. 0.20-0.35 kg/m ² per coat
Shade	RAL or NCS color charts
Solid Contents	68 ± 2 mass%; 54 ± 2 vol%
Specific Weight	1.43 ± 0.1 g/ml DIN EN ISO 2811-2 20°C
VOC Content	IIA(j), 140 g/l (2010); product contains: max. 2 g/l

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances out of our control.

Preparation of substrate

The substrate must be at least 12°C, dry, clean and free of dust and grease. It must have adequate tensile and compressive strength, be non-friable and sufficiently strong for its intended use. Remove adhesion-impairing grease, oil and paint residues by suitable methods; pressure washing at 100-150 bar is most suitable.

Before application to floors, grind the surface using a diamond-segment disc or shot-blasting machine.

Surface strength must be at least 1.5 N/mm². The possibility of moisture ingress from below must be permanently excluded. Contact Chemcolor technical support for further advice.

Preparation of material

Before use, warm both containers to room temperature (20°C, minimum 12°C). The mixing ratio is 10 : 2 by weight. Pot life is approximately 60 minutes at 20°C under normal working conditions. Do not apply after the pot life has expired, as adhesion, drying or gloss problems may occur.

Mix comp. B – hardener into the comp. A – resin in exact ratio and blend for at least 2 - 3 minutes with a slow speed mixer (300 - 400 rpm). To avoid mixing errors it is recommended to empty the resin/hardener-mixture into a clean container and mix briefly once again.

Application of material

1. Primer: C-Guard® EP 272 W HT with 20% water
2. Filling and levelling: C-Guard® EP 272 W HT with fine fillers
3. End coating: C-Guard® EP 272 W HT
4. Self-levelling coating up to 2 mm thick: C-Guard® EP 272 W HT with 0.1-0.3 mm sand (1 : 1 mix)
5. Epoxy concrete: C-Guard® EP 272 W HT with sand, cement and water

C-Guard® EP 272 W HT can be applied with a synthetic-bristle brush, a roller for waterborne two-component epoxy coatings, or by spraying. Apply mixtures containing fillers with a notched trowel or a metal or plastic float. Adjust viscosity to the application method.

Air and substrate temperatures must not be below 12°C and relative humidity must not exceed 85%. The temperature difference between air, coating and substrate must be less than 3°C to avoid disrupting drying. Dew-point conditions may affect adhesion and drying and cause surface spots. Drying times refer to 20°C; lower temperatures extend, and higher temperatures shorten, drying time. Ensure adequate ventilation in basements and poorly ventilated rooms, as evaporated moisture extends drying times and may cause film defects.

Consumption is dependent on the type, porosity and roughness of substrate, application method, etc...

Cleaning of tools and surfaces after use

Clean tools and equipment immediately after work with water and soap. Later, clean with acetone or nitro thinner, or mechanically.

Storage of material

Shelf life is 12 months from production in tightly sealed, undamaged original packaging stored dry at +10°C to +25°C.

Remarks

All technical data stated in this Product Data Sheet are based on laboratory tests on average samples. Actual measured data may vary due to circumstances beyond our control.

Do not apply epoxy materials to constantly damp surfaces. Protect fresh epoxy from moisture, condensation and water for at least 24 hours. Outdoors, apply while substrate temperature is falling; a warming substrate may cause pinholes as air rises. Under certain conditions, high temperatures from underfloor heating or the surroundings may affect the surface appearance. If heating is required, do not use heaters releasing large amounts of CO₂ or moisture (gas, paraffin or other fossil-fuel heaters), as they may damage the flooring. Use only electric heaters.

In the case of crystallization of component B, material must be heated up to approximately 40°C and dissolve the crystals. Material is after this normally usable. Crystallization is common in epoxy material.

Safety information

- Provide forced ventilation when applying the material in enclosed, unventilated spaces. Do not apply near open flames or welding.
- Wear protective gloves, goggles and clothes when mixing or using
- Before eating and after work change contaminated clothes and thoroughly wash your hands.
- Read thoroughly all Material Safety Data Sheets (MSDS) and follow product labels and warnings.

Important notice

Both components must acclimatise in the working environment for at least 24 hours before use.

The same colour may differ in shade between product types. Where colour uniformity matters, use the same product type and production batch on adjoining areas; check the batch number on the label. For later deliveries to the same project, state both the colour and the batch number from the earlier order.

Application at higher relative humidity may cause uneven colour. Remove excess moisture produced by water evaporating from the coating. Ensure adequate drying and dehumidification.

- Transport must be done only at temperatures higher than 5°C, otherwise vehicle must be heated
- Dispose of uncured or unbound material in accordance with applicable law. Fully cured material may be disposed of at municipal landfills in accordance with applicable law.
- For information and advice on the safe handling, storage and disposal of chemical products use the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data and is available on www.chemcolor.si or at Chemcolor sales services.

The harmonized European Standard EN 13813 "Screed material and floor screeds - Screed materials - Properties and requirements" specifies requirements for screed materials for use in floor construction internally.

	
Chemcolor Sevnica d.o.o. Dolnje Brezovo 35 8290 Sevnica-SLO	
EN 13813-SR-B2.0-AR0.5-IR36	
Synthetic Resin Screed Mortar/ - Coatings for interior areas, build-up according to product information	
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:	IR 36
Subsonic noise:	NPD
Sound absorption:	NPD
Thermal insulation:	NPD
Chemical resistance:	NPD

NPD = No Performance Determined

These data are based on our experience and careful research. Site conditions and workmanship affect application quality. Successful results depend on professional assessment of the substrate and practical experience in selecting the appropriate product. Please also follow the finishing-coating manufacturer's recommendations and the safety data sheet for this product.