



C-Guard® system for concrete flooring

EP 304

Two component epoxy self-levelling thick layer coating

Usage and Properties

C-GUARD® EP 304 is a two component, solvent free, epoxy top self-levelling layer for concrete and screeds with adequate tensile and compressive strength.

C-GUARD® EP 304 is used as a final layer on concrete, screeds, self-levelling materials, mastic asphalt surfaces with heavy mechanical and medium – heavy chemical exposure such as warehouses, production plants, garages, basements, showrooms, etc...

Highlights

- Good chemical resistance
- Sealing surface
- Easy maintenance
- High mechanical resistance
- Solvent free

Field of application

- As a final layer on concrete, screeds, self-levelling materials, mastic asphalt
- For floor surfaces with heavy mechanical and medium – heavy chemical exposure
- Anti-slippery coat for sealing and levelling with quartz sand

Technical properties

Packaging	Comp. A	10 kg	20 kg	
	Comp. B	2.5 kg	5 kg	
Mixing Ratio	Parts by weight	A : B =	100 : 25	
	Parts by volume	A : B =	100 : 36	
Pot life (max. allowed)	Temperature	10 °C	20 °C	30 °C
	Time	40 minutes	30 minutes	20 minutes
Processing	Temperature	Minimum 10°C (room- and floor-temperature)		
	Humidity	Minimum 30 % and maximum 75 % RH		
Curing Time (Accessibility)	Temperature	10 °C	20 °C	30 °C
	Time	72 h	24 h	16 h
Curing		5 days at 20 °C for mechanical load 8 days at 20 °C for chemical resistance		
Further Coatings		After 24 hours at 20 °C but no longer than 48 hours at 20 °C		
Consumption	Leveller with sand	cca 0.5 kg/m ²		
	Final layer	0.6 – 1.5 kg/m ² depends on surface and application method		
Solid Contents		<99	Ut. %	
Specific Weight	Comp. A+B	1.36 ± 0.1	g/ml	DIN EN ISO 2811-2 (20 °C)
Tensile Strength		cca 60	MPa	DIN 53 455
Flexural Tensile Strength		cca 45	MPa	DIN 53 452
Bond Strength		> 1.5	MPa	DIN EN 1542
Shore-Hardness D		78; 82	After 1; 7 days	DIN 53505

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 (min 10°C) to be coated has to be levelled, dry (under 3% CM) and free of dust, has to have adequate tensile and compressive strength and be free from weakly-bonded components or surfaces. Surface must be primed with C-Guard® EP 110, EP 120 or EP 152, depending on surface and application conditions.

Contaminants that decrease adhesion, such as grease, oil and paint residues must be removed. Surface defects such as blowholes and voids must be fully exposed and filled before application. All dust, loose and friable material must be completely removed by vacuum cleaner from all surfaces before application of the product. The surface strength must then be a minimum of 1.5 N/mm². The possibility of moisture ingress from the rear must be permanently excluded.

The substrate must have adequately strength for the intended use.

Preparation of material

Before the use we heat up both vessels to room temperature (preferably 20°C, minimum 15°C). Mixing ration is 100:25 (weight), pot life is approximately 30 min (20°C and normal working conditions).

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.

When components A and B have been mixed, if required add the quartz sand and fine filler and mix for 2 minutes until a uniform mix is achieved. Over mixing must be avoided to minimise air entrainment.

Application of material

As primer we recommend to use C-Guard® EP 110, EP 120 or EP 152, depending on surface and application conditions.

For levelling uneven surfaces we recommend to fill C-Guard® EP 110, EP 120, EP 152 or EP 300 with quartz flour/sand. The consistency has to be adjusted depending on surface and application method.

C-Guard® EP 304 can be applied with trowel, metal/plastic rake.

Floor and air temperature must not be below 10°C, relative humidity must not be above 75%. The difference between floor and room temperature must not be more than 3°C so the curing will not be disturbed. If a dew-point situation occurs this may affect adhesion, curing and local spotting may occur. Curing times are measured at 20 °C, lower temperature will increase and higher temperature will decrease the curing and processing time.

Cleaning of tools and surfaces after use

To remove fresh contamination and to clean tools, use C-Guard® Thinner immediately. Hardened material can only be removed mechanically.

Storage of material

Store in dry and at frost-free conditions 12 months after date of production. Ideal storage temperature is between 10 - 25°C. Bring to a suitable working temperature before application. Tightly re-seal opened containers and use the content as soon as possible.

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 on substrates with constantly high moisture. Freshly applied epoxy material should be protected from damp, condensation and water for at least 24 hours. For external applications, apply on a falling temperature. If applied during rising temperatures “pin holing” may occur from rising air. Under certain conditions, floor heating or high ambient temperatures combined with high point loading, may lead to imprints in the resin. If heating is required do heaters that produce large quantities of both CO₂ and water vapour (gas, oil, paraffin or other fossil fuel heaters), which may adversely affect the finish. For heating use only electric powered warm air blower systems.

Safety information:

- Provide ample ventilation when working with epoxy in confined spaces. When you can't adequately ventilate your workspace, wear an approved respirator with an organic vapour cartridge. Provide ventilation and wear a dust/mist mask or respirator when sanding epoxy, especially partially cured epoxy.
- 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:

- Always dispose of waste materials in accordance with all EU, National and Local Regulations. Completely hardened material is not harmful and can be disposed as building waste material in accordance with local rules.
- 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.

CE	
Chemcolor Sevnica d.o.o. Dolnje Brezovo 35 8290 Sevnica-SLO	
EN 13813-SR-B2.0-AR0.5-IR23	
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 23
Subsonic noise:	NPD
Sound absorption:	NPD
Thermal insulation:	NPD
Chemical resistance:	NPD

NPD = No Performance Determined

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