RINOL*CRETE PU-C550*

HEAVY DUTY POLYURETHANE-CEMENT MORTAR COATING

1 General data

Product description and application

RINOL***CRETE*** PU-C550 is a coloured, ready-to-use 4-components, lightly textured, heavy duty mortar coating made of high-quality polyurethane resin and mineral components. The product shows very good chemical resistance to a wide range of detergents, disinfectants, acids, solvents and other chemicals, as well as a high impact and abrasion resistance in combination with excellent hygienic properties. The obtained surface does not support bacterial or mould growth.

The unique formulation of RINOL***CRETE*** PU-C550 ensures exceptional durability even when the coating is exposed to frequent thermal shocks, constant high temperature up to 130°C and occasional spillage up to 150°C. Suitable also for freezer temperatures down to -40°C.

2 Installation instructions

Substrate preparation

The substrate must have sufficient load-bearing capacity. We recommend a minimum strength of 25 N/mm^2, which corresponds to a concrete C25/30 or screed strength class ZE, ME, AE30.

The substrate should be prepared by vacuum shot-blasting, milling or accurate diamond grinding. Afterwards, the surface is thoroughly swept and vacuumed.

The substrate must have an adhesive tensile strength of at least 1.5 N/mm^2. In addition, it must be free of oily, greasy or release agent-containing impurities, loose parts, etc. Cracks and cavities must be repaired properly beforehand. The residual moisture of the substrate must be < 8 %.
(measured according to the CM measuring method). It must also be ensured that there is no rising/pressing moisture.

Make sure that no silicone-containing or other reaction-disturbing substances come into contact with RINOL***CRETE*** PU-C550 before and during the curing phase.

Processing

Before application, the material must be acclimatised at least to ambient temperature (room and floor temperature). The ideal temperature lies in the range 16-22°C; this is also the preferred temperature range for mixing, laying and curing. The product is supplied in pre-dosed multi-component packaging. Only complete containers may be mixed.

Shake the resin RINOL***CRETE*** Comp. A 2,7Kg pack and pour it completely into a clean container. Add the liquid pigment RINOL***CRETE*** Comp. D and mix briefly with an electric stirrer (worm shaft). Add the hardener RINOL***CRETE*** Comp. B 2,7Kg pack and mix again for approx 30 seconds. After gradual addition of the filler RINOL***CRETE*** PU-C550, homogenise again for at least 2 minutes at 1500-2000 rpm. Make sure that the filler is completely wet with the liquid components and the mixture is homogeneous. An adequate mixing time is essential to facilitate mortar application.

In case of temperatures lower than 20°C, it could be necessary to mix for longer time (approx. 3-4 minutes). Avoid air formation during stirring.

The mixed product is poured on the prepared surface in a layer thickness between 6 and 12 mm. A sceed-box can be used to help pouring operations. The mortar is then smoothed with an hand trowel and optionally re-rolled with a short pile roller. The use of a roller, in gentle sweeps over the surface, will provide a more even finish. The roller should be passed over the surface a maximum of twice and it should be kept "dry" by rolling excess material onto a piece of cardboard. Excess of rolling on fresh mortar may reduce the surface slip resistance and variations in colour or gloss.

Make sure to mantain a constant mixing time between mixes. Variations in mix time can produce variations in colour shade and surface texture. Due to the relatively short material working time, careful preventive planning and enough labour are required to ensure to guarantee a continuous work flow in order that mixes are applied quickly and uniformly.

Product information		
1	**Packaging size** Component A (Resin) Component B (Hardener) Component C (Filler) Component D (Pigment)	**25,7 Kg** 2,7 Kg 2,7 Kg 20,0 Kg 0,3 Kg
2	Colours	See RINOL***CRETE*** brochure
3	Shelf life / Storage	9 months at 5 - 30 °C, protect from freezing and direct sunlight, also during transport

Technical data		
liquid mixture (A+B+C+D)		
1	Density (20°C)	approx. 1,9 g/cm^3
2	Processing time (20°C)	approx. 10 minutes
3	Processing / material Room and ambient temperature	12 - 25 °C (min. 3 °C above the dew point also during installation and curing)
4	Material consumption (depends on the substrate, among other things)	approx. 1.900 g/m^2/mm layer thickness
5	Possible thickness	from 6 to 12 mm
6	Walkability (20°C)	after approx. 12 hours
7	Next coating (20°C)	within 12-24 hrs.
8	full resistance mechanical (20°C) chemical (20°C)	 after 7 days after 28 days

RCR Flooring Products

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Technical data		
liquid mixture (A+B+C+D)		
9	Rel. Humidity	Between 40 - 80 % during the entire laying and curing phase

Technical data		
Cured material Mixture		
1	Adhesive strength (DIN ISO 4624)	> 1,5 N/mm² (concrete failure)
2	Flexural strength (DIN EN 196 / ASTM C 190)	16 N/mm²
3	Compressive strength (DIN EN 196 / ASTM C 109)	65 N/mm²
4	Tensile strength (ISO 527 / ASTM D638)	7 N/mm²
5	Abrasion resistance (DIN 53754 / ASTM D 1044)	950 mg / 1,000 cycles (Taber H22)
6	Coefficient of thermal expansion (DIN EN 1770 / ASTM C531)	4 x 10^{-5} °C^{-1}
7	Water absorption (CP.BM 2/67/2)	0 ml
8	Temperature resistance	40°C +130 °C with a thickness of 12mm

Re-coating

If reworking within 24 hours following application, the coating surface must be carefully prepared by vacuum shot blasting or diamond grinding. On fully broadcasted surfaces, surface preparation is not necessary. Before application, excess of broadcasted aggregates must be removed completely.

Health and safety measures

For information on handling the product, please refer to the latest and valid material safety data sheet and the chemical industry guidelines on handling coating materials (M004/M023). Wear suitable protective clothing and goggles during application. Clean tools immediately after finishing work with RINOL DE-X10.
Skin contact with liquid resins can lead to health impairments and allergies. Once properly cured, the product is physiologically nonhazardous.

Maintenance

To preserve the properties of the floor covering in the long term, we recommend regular care.
Please ask for our RINOL***CRETE*** maintenance instructions.

The floor can be cleaned with most of the detergents and disinfectant solutions normally used in food industry, using mechanical cleaning machines, high-pressure water cleaners and gentle steam jet cleaners.

Note

The characteristic data are approximate values determined by us, which do not have the meaning of property assurances. No liability claims can therefore be derived from the product data sheet.

For possible layer build-ups and more detailed information on the installation of RINOL***CRETE*** products, please refer to the RINOL***CRETE*** Technical guide or contact our technical team.

Only the latest version of the technical data sheet is valid and replaces all older data sheets.

Important note

In addition to the ambient temperature, the substrate temperature is of decisive importance. Chemical reactions are generally delayed at low temperatures. At low temperatures, material working time and complete curing time of the coating is prolonged. Low temperatures increase material viscosity and therefore material consumption. At higher temperatures, chemical reactions are shortened, therefore material working time, recoating time and complete curing time of the coating are reduced.

The product has a surface structure that is usual for hand-laid coatings. Slight unevenness, color differences and visible trowel/roller marks cannot be avoided due to the raw material and processing. Surface appearance and color between the cove and the floor are not identical. UV exposure though not affecting the performance of the coating, will result in yellowing of the floor which is most apparent in light colours.

Protect the coating during application, curing and for the life of the floor from moisture on the reverse side and moisture under pressure.

The application examples are based on our best knowledge and experience. We always recommend testing on site before installation.

Legal notice

Due to the different materials, substrates and deviating working conditions, no guarantee of a work result or liability for whatever reason and / or legal relationship can be assumed by RCR Flooring Products Italia S.r.l. or RCR Flooring Products GmbH. In all other respects, the respective latest general terms and conditions of RCR Flooring Products Italia S.r.l. or RCR Flooring Products GmbH shall apply, which can be requested from us or viewed and printed out at www.rinol.com up to date. We expressly reserve the right to make changes to the product specifications.

CE - marking

DIN EN 13813 "Screed material and floor screeds - Screed materials - Properties and requirements" (Jan.2003) specifies requirements for screed mortars used for indoor floor constructions.
Synthetic resin coatings and sealers are also covered by this standard. Products that comply with the above standard must be CE marked.

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CE

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05[1]
EN 13813

1119-CPR-0833
09
EN 1504-2

Synthetic resin screed/coating for interior use in buildings (structures according to technical data sheets)	
Fire behaviour:	Bfl-s1
Release of corrosive substances:	SR
Water permeability:	NPD[2]
Abrasion Resistance:	AR 0,5
Adhesive tensile strength (bond):	B > 2,0
Impact Resistance:	IR > 4
Impact sound insulation:	NPD[2]
Sound absorption:	NPD[2]
Chemical resistance:	NPD[2]

-1) the last two digits of the year in which the CE marking was affixed.

-2) NPD = No Performance Determined; characteristic value not determined

CE marking: 1504-2

Flooring systems that are subject to mechanical stresses and whose products comply with DIN EN 1504-2 must also comply with the requirement DIN EN 13813.

DIN EN 1504-2 " Products and systems for the protection and repair of concrete structures- Part 2:" "Surface protection systems for concrete" specifies the requirements for the surface protection methods" hydrophobic impregnation" impregnation and coating. If required, the corresponding leaflet can be requested.

EU Regulation 2004/42 (Decopaint Directive):

The maximum content of VOCs (product category IIA / j type sb) allowed in EU Regulation 2004/42 is 500g/l in the ready-to-use state (Limit 2010). The maximum content of RINOL***CRETE*** PU-C550 in ready-to-use condition is <500g/l VOC.

GIS Code: PU 40

For further information on the Giscode, please contact Wingis online at https://wingisonline.de

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