

RINOLEP-C548

ANTISTATIC (ESD) SELF-LEVELLING COATING

RINOL



1 General data

Product description / Application

RINOL EP-C548 is a pigmented, solvent-free, ready-to-use 2-component coating compound made of high-quality epoxy resins. Together with the conductive layer RINOL EP-E482, RINOL EP-C548 fulfils the requirements for coating systems according to DIN EN 61340-5-1.

After mixing with the appropriate hardener, RINOL EP-C548 forms a hard and robust, electrically conductive coating that is easy to clean and highly resistant to fuels and lubricants, as well as most solvents and many chemicals.

RINOL EP-C548 is used as a conductive coating for industrial floors that must fulfil high requirements for the ability to dissipate electrostatic charges, especially for the protection of ESD components.

RINOL Systems

RINOL EP-C548 is the topcoat for the RINOL system:

- RINOLETEC

2 Installation instructions

Substrate preparation

The substrate must be sufficiently stable. The surface tensile strength of the surface to be primed must be at least 1.5 N/mm² on average, the compressive strength at least 25 N/mm². The substrate must be clean and free of separating agents.

It must always be checked whether the substrate is open-pored, porous or similar, as this can lead to the formation of bubbles or pores in the coating. This must be checked by the applicator and eliminated if necessary.

RINOL EP-C548 is applied to the conductive layer RINOL EP-E482. The conductive top coat RINOL EP-C548 must be applied no later than 24 hours after the previously applied coat.

Care must be taken to ensure that no substances containing silicone or other reaction-interfering substances come into contact with RINOL EP-C548 before and during the curing phase.

Application

The product is supplied in 2-component containers in co-ordinated quantities.

Before processing, the material must always be warmed to at least ambient temperature (room and floor temperature).

The A-component is stirred for at least 2 minutes, then the B-component is completely emptied into the A-component. Both components are mixed with a suitable electric agitator for at least 2 - 3 minutes. Avoid stirring in air. The mixture must be decanted and then stirred again briefly.

RINOL EP-C548 is poured onto the surface to be coated and applied in one operation with a toothed or pin squeegee (toothed strip no. 25 - layer thickness control). For better deaeration, the liquid coating must be deaerated with a spiked roller after a waiting time of 10 - 15 minutes. Nail shoes must be worn for this purpose.

Technical data		
Liquid mixture (A+B)		
1	Container size (2-component container)	25 kg container
2	Colours	RINOL colour chart, others on request
3	Shelf life / storage	12 months at 5-20°C, in any case (also during transport) frost-free, protect from direct sunlight

Technical data		
Liquid mixture (A+B)		
1	Processing time (20°C)	approx. 1.40 g/cm ³
2	Processing / material and room temperature	approx. 20 - 25 minutes
3	Material consumption	15-25°C (min. 3 degrees above dew point also during installation and curing)
4	Walkability (20°C)	approx. 1,800 - 2,000 g/m ²
5	Subsequent coating (20°C)	after approx. 24 hours
6	Rel. air humidity	within 12-24 hours
7	Humidité relative de l'air	< 80% during the entire laying and curing phase

Technical data		
Cured material		
1	Flexural tensile strength (DIN EN 196 / ASTM C 190)	> 45 N/mm ²
2	Compressive strength (DIN EN 196 / ASTM C 109)	> 70 N/mm ²
3	Adhesive peel strength (DIN ISO 4624)	> 1,5 N/mm ²
4	Shore D hardness (DIN 53505 / ASTM D 2240)	75
5	Earth conductor resistance R _G (DIN EN 61340-4-1)	< 10 ⁹ Ω
6	Total resistance R _{G,sys} (DIN EN 61340-4-5)	< 10 ⁸ Ω
7	Man-shoe-floor (DIN EN 61340-4-5)	< 100 V
8	full load capacity mechanical (23°C) chemical (23°C)	after 7 days after 28 days

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Electrostatic behaviour

Earth conductor resistance R_G ²⁾

Characteristic value	Curing time	Test standard
$< 10^9 \Omega$	7 days /23°C	DIN EN 61340-4-1

Earth conductor resistance $R_{G,sys}$ ^{1,2)}

Characteristic value	Curing time	Test standard
$< 10^8 \Omega$	7 days /23°C	DIN EN 61340-4-5

Human-shoe-floor (walking test)

Characteristic value	Curing time	Test standard
$< 100 V$	7 days /23°C	DIN EN 61340-4-5

¹⁾ This product fulfils the requirements of TRBS 2153

²⁾ The measurement results may vary depending on the ambient conditions (e.g. temperature, humidity) and measuring device.

The discharge capacity is checked in accordance with the expert report "Ableitfähige Beschichtungen für Industriefußböden" by the Deutsche Bauchemie e.V. (German Building Chemistry Association).

Area of the coating system	Area of the coating system
$< 10m^2$	1 measurement / m^2
$10m^2 - 100m^2$	10 - 20 measurements
$> 100m^2$	10 measurements / $100m^2$

The measuring points must be at least 50cm apart. If the required measurement value is not achieved at one point, further measurements must be taken within a radius of approx. 50cm.

Maintenance

To maintain the properties of the synthetic resin flooring in the long term, we recommend regular maintenance. Please ask for our RINOL care instructions.

We would like to point out that the conductivity of conductive coating systems can be impaired by the application of care substances.

Colour shade

Almost all colour shades are possible. Slight differences in colour are unavoidable due to different production methods and variations in raw materials. This must be taken into account during coating work. Demarcated surface sections must be carried out with the same production batch (see batch no. on the delivery container). Due to the addition of carbon fibres to achieve conductivity, it is not possible to adjust the colour shade exactly. In addition, colour deviations may occur with light shades, e.g. yellow or orange, due to filling with quartz sand. Epoxy resins are generally not permanently colour-stable or tend to yellow when exposed to UV and weathering.

Protective measures

For information on handling the product, please refer to the valid safety data sheet and the guidelines of the chemical industry on handling coating

materials (M004/M023). Suitable protective clothing and safety goggles must be worn during processing.

Skin contact with liquid resins can lead to health problems and allergies.

Notes

Due care has been taken in compiling the technical data for the company's products. However, all recommendations or suggestions made with regard to the use of these products are made without guarantee, as the conditions under which they are used are beyond the company's control. It is the responsibility of the customer to check whether the products are suitable for the respective application and whether the conditions of use are appropriate for the respective product. No liability claims can therefore be derived from the product data sheet.

We would also like to point out that only the latest version of the data sheet is valid and replaces all older data sheets. The technical data given are approximate values determined by us and do not constitute a guarantee of properties. Misprints, errors, translation errors and changes reserved. Please note that the information in the system data sheets of the different languages / countries may differ. Further information can be found on our website at www.rinol.com

EP resins are generally not colour-stable in the long term under UV and weathering influences. Chemically and mechanically stressed surfaces are subject to wear and tear due to use. Regular maintenance is recommended. Consumption quantities, processing time, walkability and achievement of load-bearing capacity depend on temperature and object.

The technical data sheet does not exempt the user from carrying out his own tests - if necessary, within the scope of his possibilities - with regard to applicability. Please refer to the RINOL Technical Guide for layer build-up options and more detailed information on the installation of RINOL products.

Once the carbon fibre-filled top layer has hardened, individual carbon fibre threads may stand up in the hardened surface. This does not affect the functionality in any way.

Important note

Chemical reactions are generally delayed at low temperatures. This extends the recoating and walkability times. The higher viscosity of the products also increases material consumption.

At higher temperatures, the chemical reactions are shortened and the recoating and walkability times are reduced.

The material must always be protected from water during application. Furthermore, the material must be protected from direct contact with water for approx. 24 hours (at 20°C) after application. Within this time, exposure to water (e.g. also dew, condensation) can lead to white discolouration (carbamate formation) on the surface or the surface is sticky at these points and this can impair adhesion to subsequent coatings.

Applications that are not clearly mentioned in this technical data sheet may only be carried out after consultation and written confirmation with or by the application technology department of RCR Flooring Products Italia S.r.l..

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Always protect against the effects of moisture on the back and from pressure, even during use.

Legal information:

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

CE labelling:

DIN EN 13813 "Screed mortars, screed compounds and screeds - 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 labelled with the CE mark.

 RCR Flooring Products Italia S.r.l. Via Chiarugi 76/U I-45100 Rovigo
05 ¹ EN 13813 SR-B1,5-IR4
1119-CPR-0833 09 EN 1504-2

Synthetic resin screed/coating for indoor use in buildings (structures according to technical data sheets)	
Fire behaviour:	BFL-S1
Water permeability:	NPD ²
Wear resistance (Abrasion Resistance):	NPD ²
Tensile bond strength (Bond):	B 1,5
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 specified

CE marking: 1504-2

Floor systems that are subject to mechanical stresses and whose products comply with DIN EN 1504-2 must also fulfil the requirements of 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 data sheet can be requested.

EU Regulation 2004/42 (Decopaint Directive):

The maximum VOC content permitted in EU Regulation 2004/42 (product category IIA / j type sb) is 500g/l when ready for use (limit 2010). The maximum content of RINOL EP-C548 in ready-to-use condition is <500g/l VOC.

GIS Code: WGK RE 30

Further information on the GIS code is available from Wingis online at <https://www.wingisonline.de>