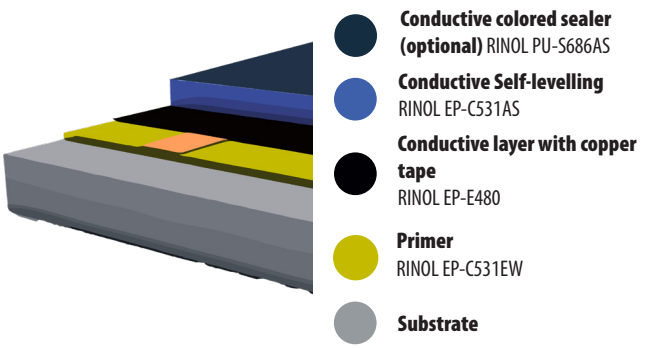
RINOL *CONDUCTIVE ECO*

ELECTRICALLY CONDUCTIVE WATER BASED COATING SYSTEM

1. System description

RINOL CONDUCTIVE ECO is a three / four-layer, low-emission water based epoxy system that ensures safe electrostatic discharge for sensitive environments. It is designed for medium to heavy-duty use and certified under the RINOLGreenCoat Line for sustainability.

2. System composition



3. Areas of application

The RINOL CONDUCTIVE ECO system is specifically designed to be applied in various types of industrial environments, adapting to the needs of several sectors, including:

- Explosion Proof Areas
- AGV-based automated warehouses
- Power stations
- Transformers and substations
- Electronics industry

4. Properties

- Low odour during application
- Electrically conductive with minimal use of copper tape
- Durable and long lasting
- Smooth, easy to clean surface
- Non-dusting
- Jointless
- Good chemical resistance

5. Certifications

The individual products within RINOL CONDUCTIVE ECO are certified to meet high standards of sustainability and safe indoor environments.
Indoor Air Comfort Gold certifies very low VOC emissions, meeting stringent worldwide indoor air quality standards such as:
AgBB: Complies with the criteria of the German Committee for Health-Related Evaluation of Building Products (AgBB), ensuring low VOC emissions and suitability for use in environments where indoor air quality is a priority, such as residential and commercial spaces.
A+ French VOC Emissions: Awarded an A+ rating, demonstrating very low VOC emissions, suitable for applications focused on indoor air quality, such as schools and healthcare facilities.
BREEAM: Supports compliance with BREEAM criteria, contributing to sustainable building practices and environmental performance.
LEED: Compatible with LEED standards, helping projects earn credits for indoor environmental quality through low VOC content and durability.

6. Technical data

The RINOL CONDUCTIVE ECO system provides detailed technical data, including physical and mechanical properties:

Technical Data		
1	Thickness	2 -3 mm
2	Maximum service temperature	45 °C
3	Compressive strength (DIN EN 196 / ASTM C 109)	45 N/mm^2
4	Flexural strength (DIN EN 196 / ASTM C 190)	30 N/mm^2
5	Adhesive strength (DIN ISO 4624)	> 1,5 N/mm^2
6	Abrasion resistance (Taber CS10 wheel) (DIN 53754 / ASTM D 1044)	Without sealer: 30mg / 1000 cycles With sealer: 80mg / 1000 cycles
7	Shore D hardness (DIN 53505 / ASTM D 2240)	65
8	Resistance to earth (DIN EN 1081)	< 1 x 10^6 Ω
9	Water vapour permeability classification (DIN EN ISO 7783-2)	III
10	Colour stability (scale 1-8, best=8) (DIN EN ISO 877)	Without sealer: 6 With sealer: 8

7. Chemical Resistance

The RINOL CONDUCTIVE ECO floors, under ambient temperature conditions, demonstrate resistance to:

Weak mineral acids, such as hydrochloric, nitric, phosphoric, and sulfuric acids.
Alkaline substances, including sodium hydroxide up to 50% concentration.
Standard cleaning agents used for floor maintenance.
Sugars, even with repeated contacts.
Mineral oils, diesel, kerosene, and gasoline.

8. Available colours

The RINOL CONDUCTIVE ECO system is available in a wide range of RAL and NCS colours, offering a broad selection to meet the aesthetic preferences of any project.

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9. Application Instructions

9.1. Substrates

9.1.1 Suitable substrates are concrete, polymer modified concrete or screeds, anhydrite or magnesite.

9.1.2 The substrate should have a minimum tensile strength of 1.5 N/mm^2 and compressive strength of 25 N/mm^2 measured to an approved national standard.

9.1.3 The substrate should be visibly dry. For concrete and polymer modified concrete, the moisture content should not exceed 8%, measured using CM (calcium carbide) Method. For anhydrite or magnesite substrates, moisture contents up to 0.8% by weight are acceptable.

9.1.4 The substrate must be clean and free from dust and loose particles. All traces of contaminants such as oils, fats, greases, paint residues, chemicals, algae and laitance should be removed.

9.2. Preparation

9.2.1 The preferred method of surface preparation is vacuum blasting. Other methods such as scabbling, grit blasting or grinding may be used but are generally less satisfactory.

9.3. Priming

9.3.1 RINOL EP-C531EW is used as water-based primer. The three components of RINOL EP-C531EW are mixed using an electric mixer, taking care to avoid the inclusion of air. Add 5 to 10% of clean water and mix again. When homogeneous, the mixture is poured onto the prepared surface and spread with a trowel. The material consumption should be approximately 500-800 g/m^2.

9.3.2 RINOL EP-C531EW must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.4. Application of the conductive layer

9.4.1 The conductive layer RINOL EP-E480 should be applied when the primer is hardened but not completely cured. This will normally be after 12 - 15 hours.

9.4.2 Copper tapes are fixed to the surface of the primer.

9.4.3 Mix the two components of RINOL EP-E480 using an electric mixer, taking care to avoid the inclusion of air. This mixture is then poured onto the surface of the levelling layer and spread with a rubber spatula at a rate of 70 - 90 g/m^2. It should then be rolled with a short pile roller.

9.4.4 RINOL EP-E480 must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.5. Application of the conductive self levelling

9.5.1 The topcoat RINOL EP-C531AS should be applied when the conductive layer has hardened but not completely cured. This will normally be after 12 - 15 hours.

9.5.2 The three components of RINOL EP-C531AS are mixed using an electric mixer, taking care to avoid the inclusion of air. Add 5 to 10% of clean water and mix again. When homogeneous, the mixture is poured onto the prepared surface and spread with a notched trowel. The material consumption should be approximately 2000-2500 g/m^2. The teeth of the notched trowel must be changed regularly to ensure uniform thickness. Immediately after application, the wet finish must be treated with a spiked roller.

9.5.3 RINOL EP-C531AS must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.6. Application of the sealer (optional)

9.6.1 The sealer RINOL PU-S686AS should be applied when the self levelling is hardened but not completely cured. This will normally be after 12 - 15 hours.

9.6.2 The two components of RINOL PU-S686AS should be mixed using an electric mixer, taking care to avoid the inclusion of air. When homogeneous, pour the mixture onto the primed surface and apply with a 10-12mm hair roller. The material consumption is approximately 80 - 100 g/m^2. Two layers may be necessary to obtain a good color coverage.

9.6.3 RINOL PU-S686AS must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.6.4 At 20 °C RINOL CONDUCTIVE ECO can be walked on after 18 - 24 hours and is fully cured after 7 days and full chemical resistant after 28 days.

10. Specification clauses for RINOL CONDUCTIVE ECO

All products must be applied and cured at temperatures between 15 and 25°C and relative humidity <80%.

The primer shall be RINOL EP-C531EW, applied at a rate of 500 - 800 g/m^2 to ensure complete sealing of the substrate surface.

Quartz sand should not be broadcasted on wet primer.

Copper strips are fixed to the primer layer, prior the application of the conductive layer.

The conductive layer shall be RINOL EP-E480, applied at a rate of 70 - 90 g/m^2.

The conductive self levelling shall be RINOL EP-C531AS, applied at a rate of 2000 - 2500 g/m^2.

As a colored sealer, RINOL PU-S686AS is optionally applied at a rate of approx. 80-100 g/m^2 per coat, using a medium hair roller as appropriate.

11. Maintenance

The RINOL CONDUCTIVE ECO system is easy to maintain and clean. To ensure the system's longevity and performance, it is essential to follow the provided maintenance instructions. This may include regular cleaning with suitable products to remove dirt and residues, periodic inspection of the floor for signs of wear, and repair or replacement of damaged areas if necessary. With proper maintenance, the RINOL CONDUCTIVE ECO system can provide many years of reliable service.

12. Safety

Safety is a priority at RCR Flooring Products Italia S.r.l. We provide information on safety and precautions during the application of the RINOL systems. This may include the use of personal protective equipment during application, adequate ventilation, prevention of exposure to chemicals, and proper disposal of product waste. It is important to follow all safety guidelines to ensure a safe working environment and maintain the integrity of the systems.

13. Health and Safety Measures

Consult the latest valid Material Safety Data Sheet (MSDS) for the products that are part of the system and the Chemical Industry Guidelines on the Handling of Coating Materials (M004/M023) for information on the handling of the products. Wear suitable protective clothing such as gloves and goggles during application.

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Skin contact with liquid resins can cause health damage and allergies. Once cured properly, the product is not hazardous.

14. Customer Service

At RCR Flooring Products Italia S.r.l., we pride ourselves on providing exceptional customer service. Our team of experts are on hand to answer your questions, provide technical advice and help you choose the RINOL systems that best suit your needs. We also provide application information to ensure that our systems are installed correctly and deliver optimum performance.

15. Legal notice

The technical data for the Company's products and systems have been compiled with due care. However, any 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 control of the Company. It is the responsibility of the customer to determine whether the products are suitable for the particular application and whether the conditions of use are appropriate for the particular product. No liability can therefore be derived from the product data sheet.

Please note that only the latest version of the data sheet is valid and replaces all previous versions. 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 datasheets may differ in different languages/ countries. For further information please visit our website at www.rinol.com.

The technical data sheet does not exempt the user from carrying out his own application tests, if necessary, within the limits of his capabilities. Please refer to the RINOL Technical Guide for information on coating options and more detailed information on the installation of RINOL products.

16. CE Marking

The individual products that make up the system are certified according to DIN EN 13813 "Screed materials and floor screeds - Screed materials - Properties and requirements" (January 2003) and EN 1504-2. These standards specify the requirements for screed mortars used in internal floor constructions. Resin coatings and sealants are also covered by these standards. Products complying with the mentioned standards must have the CE mark.

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