

RINOL MORTAR LE

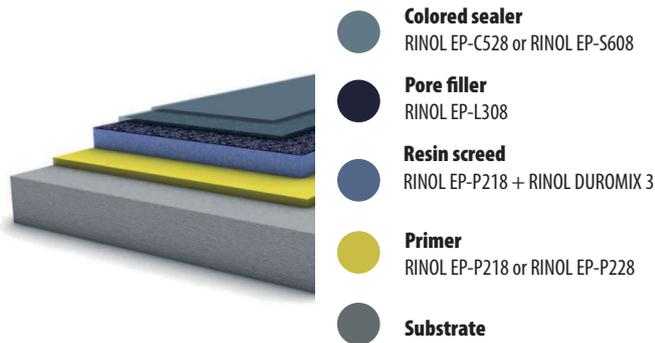
HEAVY DUTY LOW-EMISSION EPOXY MORTAR SYSTEM

RINOL

1. System description

RINOL MORTAR LE is a low-emission, multi-layer epoxy screed system designed for wet or dry high-traffic areas. It delivers high mechanical strength, chemical resistance, and a durable, slip-resistant finish, making it ideal for safety-critical and hygienic environments. As part of the RINOLGreenCoat Line, it aligns performance with sustainable construction values.

2. System composition



3. Areas of application

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

- Medium to heavy duty use for industrial floors
- Pharmaceutical industry
- Food and beverage, manufacturing and packaging areas
- Manufacturing and industrial facilities
- Automotive industry
- Aircraft hangars

4. Properties

- Low VOC emission
- Low odour during application
- Durable and long lasting
- High mechanical resistances
- Hygienic and impervious
- Tailored anti-slip finish
- Jointless
- Good chemical resistance

5. Certifications

The individual products within RINOL MORTAR LE system are certified to meet high quality standards:

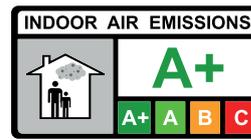
Synthetic resin screed material according to EN 13813:2002

Coating for surface protection of concrete according to EN 1504-2:2004

RINOL EP-C528: Cleanroom suitable material, Fraunhofer IPA.

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 MORTAR LE system provides detailed technical data, including physical and mechanical properties:

Technical Data		
1	Thickness	6 - 8 mm
2	Maximum service temperature	60 °C
3	Compressive strength (DIN EN 196 / ASTM C 109)	115 N/mm ²
4	Flexural strength (DIN EN 196 / ASTM C 190)	40 N/mm ²
5	Elastic modulus (DIN 1048) N/mm ²	18.000
6	Adhesive strength (DIN ISO 4624)	> 1,5 N/mm ²
7	Abrasion resistance (Taber CS10 wheel) (DIN 53754 / ASTM D 1044)	80mg / 1000 cycles
8	Shore D hardness (DIN 53505 / ASTM D 2240)	84
9	Slip resistance (DIN 51130)	R9 - R13
10	Colour stability (scale 1-8, best=8) (DIN EN ISO 877)	6

7. Chemical Resistance

The RINOL MORTAR LE 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.



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COMPANY WITH
MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO 9001 • ISO 14001

8. Available colours

The RINOL MORTAR LE system is available in a wide range of colours, offering a broad selection to meet the aesthetic preferences of any project.

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/mm² and compressive strength of 25 N/mm² 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 4% by weight when measured according to a recognised standard. RINOL range includes primers that can optionally be used when the static moisture content reaches 6%, 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 / Regulating layer

9.3.1 The primer is mixed using an electric mixer, taking care to avoid the inclusion of air. When homogeneous, the mixture is poured onto the prepared surface and spread using a Kaub spatula or rubber spreader. Material consumption is 250 - 500 g/m² depending on the roughness of the substrate.

9.3.2 Dry quartz sand (RINOL QS-20) is scattered on the wet primer at a rate of 800 - 1200 g/m² to ensure good adhesion between the coats.

9.3.3 RINOL primers must not be applied when the temperature falls or is expected to fall within 3°C of the dew point.

9.4. Resin screed

9.4.1 The resin MORTAR LE should be applied once the primer has hardened but not completely cured. This will normally be after 12 - 15 hours.

9.4.2 Before applying the following layer, remove excess silica sand and sand and vacuum the primer.

9.4.3 The two components of RINOL EP-P218 should be mixed using an electric mixer taking care to avoid the inclusion of air. When the mix is homogeneous the quartz mixture RINOL DUROMIX 3 should be added at the rate of 9 kg quartz to 1 kg resin and mixed again in a forced action mixer until homogeneous.

The resulting MORTAR LE is poured onto the primed surface and spread using a spatula or trowel at a rate of approximately 2 kg/m²/mm, at a minimum thickness of 5mm (10 Kg/m²).

9.4.4 The screed must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.5. Pore filler

9.5.1 The RINOL EP-L308 sealer should be applied when the resin screed has hardened but not completely cured. This will normally be after 12 - 15 hours.

9.5.3 The two components of RINOL EP-L308 should be mixed using an electric mixer, taking care to avoid the inclusion of air. When the mixture is homogeneous, add a mixture of dry quartz sands (1 part RINOL QS-10, 3 parts RINOL QS-20) at a ratio of 20 parts sand to 100 parts resin and mix again until homogeneous. This mixture is then poured onto the primed surface and spread with a spatula, trowel or scraper at a rate of 800 - 1200 g/m².

9.5.4 Dry quartz sand (RINOL QS15 or QS20) can be optionally scattered on the wet levelling coat at a rate of 800 - 1200 g/m², depending on the required antiskid properties.

9.5.5 RINOL EP-L308 must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.6. Colored sealer

9.6.1 The sealer RINOL EP-C528 or RINOL EP-S608 should be applied when the pore filler is hardened but not completely cured. This will normally be after 12 - 15 hours.

9.6.2 If quartz sand has been scattered, prior to application of the seal coat, remove excess of sand and sand and vacuum clean the primer.

9.6.3 The two components of RINOL EP-C528 or RINOL EP-S608 should be mixed using an electric mixer, taking care to avoid the inclusion of air. When homogeneous, pour the mixture onto the surface and apply with a lambskin or mohair roller. The material consumption is approximately 200 - 300 g/m² for smooth surface and 400 - 800 g/m² for anti-slip surface.

9.6.4 The sealer must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.6.5 At 20 °C RINOL MORTAR LE 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 MORTAR LE

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

The primer shall be RINOL EP-P218 or RINOL EP-P228 applied at a rate of 250 - 500 g/m² in such a manner as to ensure complete sealing of the substrate surface.

Dry silica sand (RINOL QS 20) shall be broadcast into the wet primer at a rate of 800 - 1200 g/m².

The resin MORTAR LE shall be RINOL EP-P218 filled with RINOL DUROMIX 3 quartz at a rate of 9 kg quartz to 1 kg resin. The resin MORTAR LE shall be applied at a rate of approximately 2 kg/m²/mm at a minimum thickness of 5 mm.

The pore filler shall be RINOL EP-L308 filled with dry quartz sand at a ratio of 20 parts sand to 100 parts resin. The quartz sand shall be 1 part RINOL QS-10, 3 parts RINOL QS-20. The leveling coat is applied at a rate of 800 - 1200 g/m².

Optionally sprinkle dry quartz sand (RINOL QS15 or QS20) into the wet layer at a rate of 800-1200 g/m² depending on the anti-slip properties required.

Apply a coat of RINOL EP-C523 or RINOL EP-C527 at a rate of approx. 200-800 g/m². For light colours, two or three layers of sealer may be required for a complete and evenly covering.

11. Maintenance

The RINOL MORTAR LE system is easy to maintain and clean. To ensure

the longevity and performance of the system, it is essential to follow the maintenance instructions provided. This includes regular cleaning with suitable products to remove dirt and residue, periodic inspection of the floor for signs of wear and repair or replacement of damaged areas as necessary. With proper maintenance, the RINOL MORTAR LE 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.

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 MORTAR LEs 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.