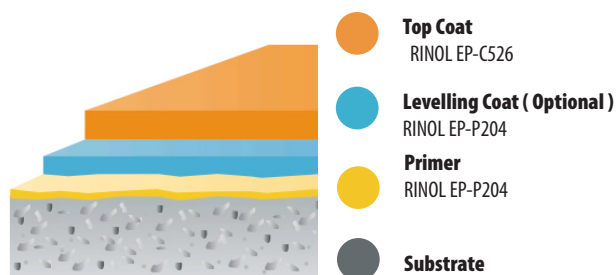


1. System description

RINOL WHG is a two- or three-layer epoxy system designed to provide excellent chemical resistance and crack-bridging properties for industrial flooring. It is intended for areas subject to moderate to heavy traffic and mechanical stress.

2. System composition



3. Areas of application

The RINOL WHG 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
- Chemical plants
- Pharmaceutical industry
- Clean rooms
- Battery plants
- Secondary containment basins

4. Properties

- Very good chemical resistance
- Crack bridging
- Durable and long lasting
- Smooth or anti-slip surface
- Dust free
- Jointless
- Easy to clean and to disinfect

5. Certifications

The individual products within RINOL WHG are certified to meet high standards of sustainability and safe indoor environments.

Synthetic resin screed material according to EN 13813:2002
Coating for surface protection of concrete according to EN 1504-2:2004
DIBT approved according to the German Water Resources Act (WHG)
Low-Emitting Materials under LEED v4
RINOL EP CS26AS: Cleanroom suitable material, Fraunhofer IPA
DIN 51130 Determination of the anti-slip property



Cleanroom[®]
Suitable
Materials



6. Technical data

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

Technical Data		
1	Thickness	2 - 3 mm
2	Maximum service temperature	60 °C
3	Compressive strength (DIN EN 196 / ASTM C 109)	> 58 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	Crack bridging ability (ZG DIBt)	0,4 mm
7	Abrasion resistance (Taber CS10 wheel) (DIN 53754 / ASTM D 1044)	< 60 mg / 1000 cycles
8	Shore D hardness (DIN 53505 / ASTM D 2240)	> 72
9	Colour stability (scale 1-8, best=8) (DIN EN ISO 877)	6

7. Chemical Resistance

The RINOL WHG 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.

Solvents, even with repeated contacts.

Mineral oils, diesel, kerosene, and gasoline.

8. Available colours

The RINOL WHG system is available in a wide range of RAL and NCS 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 6% by weight when

measured according to CM 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 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 trowel. Material consumption is 250 - 500 g/m² depending on the roughness of the substrate.

9.3.2 Dry quartz sand (RINOL QS10 or QS20) 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. Application of the levelling layer (optional)

9.4.1 The levelling layer RINOL EP-P204 can 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-P204 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 50 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.

9.4.4 Dry quartz sand (RINOL QS10 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.

9.4.5 RINOL EP-P204 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 final layer

9.5.1 The topcoat RINOL EP-C526 should be applied when the levelling coat has hardened but not completely cured. This will normally be after 12 - 15 hours.

9.5.2 If quartz sand has been scattered, before applying the top coat, remove excess quartz sand and sand and vacuum the surface.

9.5.3 Before applying the top coat, mix the two components of RINOL EP-C526 with an electric mixer, taking care to avoid the inclusion of air. When the mixture is homogeneous, pour it on the surface of the levelling layer and spread it with a serrated spatula. The material consumption should be approximately 500-1000 g/m² for anti-slip surface and 1800-2500 g/m² for self levelling surface. The teeth of the notched trowel must be changed regularly to ensure uniform thickness.

9.5.4 RINOL EP-C526 must not be applied when the temperature falls or is expected to fall within 3 °C of the dew point.

9.5.5 At 20 °C RINOL WHG can be walked on after 18 to 24 hours, reaches full mechanical resistance after 7 days and full chemical resistance after 28 days.

10. Specification clauses for RINOL WHG

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

The primer shall be RINOL EP-P204, applied at a rate of 250 - 500 g/m² to ensure complete sealing of the substrate surface.

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

The levelling layer shall be RINOL EP-P204 filled with dry quartz sand at a ratio of 50 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 QS10 or QS20) into the wet levelling layer at a rate of 800-1200 g/m² depending on the anti-slip properties required.

For self levelling surface, apply a top coat of RINOL EP-C526 at a consumption of 1800-2500 g/m². To comply with the German WHG certification, a minimum application rate of 2500 g/m² is required.

For anti-slip surface, the required surface profile shall be achieved by applying RINOL EP-C526 with a smooth spatula and using a suitable roller to homogenize the surface.

11. Maintenance

The RINOL WHG 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 WHG 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 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.