

1 General data

Product description / Application

RINOL DensiPlus is a high-quality, water-based densifier based on modified lithium silicates, specifically designed for the hardening and post-treatment of concrete floors.

RINOL DensiPlus is suitable for both new and existing concrete floors, in interior and exterior areas, and improves the hardness, surface strength and performance of industrial and commercial concrete surfaces.

RINOL DensiPlus penetrates into the concrete surface and reacts with the calcium hydroxide present in the concrete matrix, forming a denser and harder surface structure. This reaction improves the mechanical properties of the surface, reduces porosity and helps increase resistance to water, oil and other liquid penetration.

Key Characteristics

- **Deep penetration:** penetrates approx. 3–5 mm into porous substrates and forms durable, insoluble lithium silicate compounds.
- **Increased surface hardness:** improves the hardness and density of the concrete surface.
- **Improved abrasion resistance:** helps reduce wear, dusting and surface degradation.
- **Non-film-forming:** does not form a surface coating and maintains the breathability of the concrete.
- **Fast reaction:** reacts with the concrete surface and contributes to rapid surface hardening after application.
- **Low VOC:** low-emission formulation with minimal volatile organic compounds.
- **Easy application:** ready-to-use product requiring no dilution or premixing.
- **Reduced maintenance requirements:** helps improve long-term surface durability and facilitates routine maintenance.

Recommended application areas

RINOL DensiPlus is suitable for concrete floors where increased surface hardness, reduced dusting, improved abrasion resistance and easier maintenance are required.

Typical areas of application include:

- Interior and exterior concrete floors in industrial, commercial and public buildings
- Commercial and retail floors subject to high pedestrian traffic
- Diamond-polished concrete floors requiring improved surface density and durability
- Warehouses and logistics areas subject to pedestrian traffic, machinery traffic and material handling
- Manufacturing plants and production areas exposed to mechanical wear and occasional industrial spills
- Distribution centres and loading areas subject to continuous operational stress
- Transport hubs such as airports, railway stations and bus depots
- Institutional buildings, including educational and governmental facilities

Suitability must always be assessed according to the condition, porosity and strength of the concrete surface, the expected traffic and the required finish.



Technical data		
Liquid content		
1	Container size	25 Liter drums 200 Liter drums 1000 Liter IBC container
2	Appearance	Colorless liquid
3	Shelf life / storage	12 months at 5–20°C, Always store in a frost-free place (including during transport) and protect from direct sunlight.

Technical data		
Liquid content		
1	Processing / material and room temperature	5–45°C (min. 3 degrees above dew point even during installation and curing)
2	Material consumption	Approx. 60 ml / m ²
3	Walkability (20°C)	After 2–5 hours approx.
4	Rel. air humidity	< 80% throughout the installation and curing phase
5	Electrical resistance	Virtually equal to the existing concrete (ASTM F150: 10 ⁶ Ω)

2 Application Guidelines

Surface preparation

For new concrete:

The concrete must be properly cured, ideally for at least 28 days, before application. The surface must be clean, dry and free from contaminants such as dust, oil, curing compounds, previous coatings or other surface treatments that may prevent penetration of the densifier. Mechanical or chemical preparation may be required to remove curing compounds or other surface treatments.

For existing or older concrete:

The surface must be thoroughly cleaned to remove dirt, grease, previous sealers, coatings and any other contaminants that may prevent effective penetration of RINOL DensiPlus.

Application (new or existing concrete)

Ambient temperature during application:

RINOL DensiPlus must be applied at an ambient temperature between 5°C and 45°C. Application should be avoided under extreme conditions such as direct sunlight, high humidity or rain, as these may affect drying time and product effectiveness.

Exterior applications:

Do not apply during rain. The applied product must be completely dry before the surface is exposed to rain. Suitability for exterior use must be assessed

according to the condition of the concrete and the local climatic exposure.

Method of application:

RINOL DensiPlus is ready to use and must be applied directly from the container without dilution or premixing. Apply using a low-pressure sprayer, brush, mop or squeegee, ensuring even and uniform coverage. Work systematically across the area to avoid untreated sections.

Material distribution:

After application, distribute the product evenly over the concrete surface using a soft-bristle brush or microfibre pad. Uniform distribution is essential to allow even penetration into the concrete pores and to support effective densification.

Dwell time / reaction time

Allow RINOL DensiPlus to remain on the surface for at least 30 minutes, keeping the surface moist during this time. This dwell time allows the densifier to penetrate and react with the concrete.

Prevention of residues:

Excess RINOL DensiPlus must not be allowed to puddle or dry on the floor. Dried residues may appear as white marks and must be removed immediately by scrubbing.

Cleaning and Maintenance Guidelines

Floors treated with RINOL DensiPlus require regular maintenance in order to preserve their mechanical and aesthetic properties over time. Correct cleaning helps maintain surface density, reduce dirt absorption and preserve the desired gloss level.

- **Routine cleaning:** For more thorough cleaning, use an auto-scrubber or a damp mop with a neutral pH cleaner. This will effectively remove grime and maintain the integrity of the treated surface.
- **Immediate spill response:** To prevent staining, spills should be cleaned up immediately. RINOL DensiPlus provides excellent resistance to staining, but prompt removal of harsh chemicals, oils, and other liquids is crucial to prevent potential damage.
- **Deep cleaning:** Periodically, it may be necessary to perform a deeper clean, especially in high-traffic areas. Use a low-foam detergent with a pH between 7 and 8 to avoid damaging the treated surface. Rinse the floor thoroughly with clean water after deep cleaning to remove any residue.
- **Avoid harsh chemicals:** Do not use acidic or highly alkaline cleaners as they can damage the treated surface and diminish the floor's appearance. Avoid bleach and ammonia-based cleaners. If the floor has been exposed to such chemicals, neutralize the area as soon as possible.
- **Buffing and polishing:** If the floor begins to dull, dry buffing or burnishing with a high-speed buffer can restore the original sheen. Use a polishing pad suitable for the level of gloss desired on the floor.
- **Protective measures:** Place walk-off mats at entrances and exits to reduce the amount of dirt and grit tracked onto the floor. Regularly clean these mats to maintain their effectiveness.

Regular maintenance helps preserve the durability, appearance, gloss level and hygiene of floors treated with RINOL DensiPlus.

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 gloves, protective clothing and eye/face protection (safety goggles) must be worn during processing. Causes serious eye irritation. Causes skin irritation. Wash hands thoroughly after handling.

Notes

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.

Professional guidance for combined use of densifiers and sealers with mechanical polish

The combined use of concrete densifiers, sealers and mechanical polishing systems requires specialist assessment. A trained specialist should evaluate the specific condition of the concrete floor, including strength, porosity, previous treatments and level of existing wear.

Based on this assessment, the appropriate polishing sequence and treatment protocol can be defined.

Expert evaluation

A thorough analysis of the concrete's condition is essential to determine the suitability of combined treatments. Factors such as age of the concrete, previous treatments, and expected usage must be considered.

Customized treatment plan

A tailored treatment plan should define the application of densifiers and sealers together with the mechanical polishing steps. The plan should be based on the required durability, appearance and maintenance requirements of the floor.

Sequential application

The sequence of densifier application, mechanical polishing and sealer application is critical. Typically, the densifier is applied first to harden and densify the concrete, followed by mechanical polishing to achieve the desired smoothness and gloss. Sealers may be used as a final step to improve stain

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resistance and surface protection.

Monitoring and adjustment

During the treatment process, monitoring and adjustment may be required to adapt to changing surface conditions or to achieve the required result.

Correct planning and execution help ensure a high-quality finish that meets both functional and aesthetic requirements and supports long-term floor performance.

Important note

In addition to ambient temperature, substrate temperature is also important.

Chemical reactions are generally slower at lower temperatures. This extends drying and walkability times. Higher product viscosity may also increase material consumption.

At higher temperatures, chemical reactions are accelerated and drying and walkability times are reduced.

Coverage Considerations

The consumption values specified in this technical data sheet are guide values only and may vary depending on concrete porosity, ambient humidity, temperature and surface texture. Different substrates and surface conditions can significantly affect the quantity of product required.

Before full-scale application, a small test area is recommended to determine the actual consumption and confirm compatibility with the concrete surface.

The result of the test area should be used to estimate the quantity of RINOL DensiPlus required for the project and to verify that the desired performance and appearance can be achieved.

Legal information

Due to the variety of materials, substrates and working conditions, RCR Flooring Products does not guarantee the results of its work or assume any liability, 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 at www.rinol.com. We expressly reserve the right to make changes to product specifications.