



Renov Steel

Cementitious passivator for the corrosion protection of reinforced concrete reinforcement bars

Drykos® **Renov Steel** is a single-component, powder-based cementitious passivator specifically designed for the anti-corrosive protection of reinforcement steel in concrete repair systems.

The product, based on cementitious binders modified with super-pozzolanic additives, polymer resins, and corrosion inhibitors, develops high alkalinity and a chemical reaction capable of counteracting the electrochemical oxidation processes of steel. Applied as a fluid slurry, Drykos® **Renov Steel** forms an adherent and continuous protective coating on the bars, capable of stopping ongoing corrosion and preventing its re-initiation even in the presence of aggressive agents such as chlorides and sulfates.

The product constitutes the essential preliminary treatment in concrete restoration cycles, ensuring the durability and continuity of the intervention.

CHARACTERISTICS

Certifications



EN 1504-7

Products and systems for the protection and repair of concrete structures - Reinforcement corrosion protection

Main characteristics

- High anti-corrosive protection of steel
- Chemical action inhibiting oxidation processes
- High protective alkalinity (pH > 12)
- Excellent adhesion to reinforcement steel and concrete
- Effective even in the presence of chlorides and sulfates
- Easy brush application
- Compatible with cementitious repair mortars
- High durability of the restoration system
- Single-component product ready for use with the addition of water only

Fields of use

- Protection of exposed reinforcement steel in degraded concrete
- Structural restoration interventions (columns, beams, balconies, floor slabs)
- Civil and infrastructural works
- Structures in aggressive environments (marine, industrial, mountain)
- Restoration cycles with mortars from the Drykos Repair System® line

Green Technology & LEED

Product formulated to reduce environmental impact, characterized by very low VOC emissions (Very Low Emission), suitable for contributing to LEED credits for indoor air quality and compliant, where applicable, with CAM (Minimum Environmental Criteria) requirements, also thanks to its recycled material content.

SPECIFICHE TECNICHE

Packaging

2.5 kg bucket

Color

Light blue.

Appearance

Powder.

Shelf life

12 months from production date.

Storage conditions

Store correctly in the original, sealed, intact packaging, protected from moisture and direct sunlight, at temperatures between +5°C and +35°C.

APPLICATION DATA

Theoretical consumption

~ 0.05-0.07 kg per linear meter of bar to be passivated.

Coverage

35-50 linear meters of bar per package.

Thinner

Water.

Application temperature

Minimum +5°C | Maximum +35°C

APPLICATION INFO

Substrate preparation

Metal surfaces must be carefully prepared by completely removing loose rust and corrosion products. Cleaning must be carried out by sandblasting or mechanical brushing until a clean metal condition is reached (Sa 2½ grade or equivalent) to ensure the effectiveness of the anti-corrosive treatment. It is essential to completely remove dust, residues, and contaminants. The surrounding concrete substrate must be prepared beforehand by removing degraded parts and subsequent cleaning.



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Product preparation

Drykos® **Renov Steel** is a single-component product to be mixed exclusively with clean water until a fluid and easily brush-applicable slurry is obtained.

Pour approximately 2/3 of the required mixing water into a clean container, then gradually add the powder product while stirring continuously, avoiding the formation of lumps. Subsequently complete with the remaining amount of water until the desired consistency is reached. Mixing must be performed using a low-speed mechanical stirrer (~ 300–500 rpm) for at least 2-3 minutes, until a homogeneous, fluid, and lump-free mixture suitable for brush application is obtained.

The water/product ratio is approximately between 32% and 40% by weight, about 0.8-1 liter per 2.5 kg bucket, to be adjusted according to the required workability and environmental conditions. It is advisable to let the mixture rest for about 1-2 minutes and remix briefly before use. Do not add water beyond the indicated limits and do not remix the product during the setting phase. Prepare only the amount of material applicable within the pot life.

Application

Drykos® **Renov Steel** must be applied to previously prepared reinforcement steel brought to a clean metal condition, using a brush or equivalent tools suitable for applying cementitious slurries.

After correct mixing, the product must be applied uniformly over the entire surface of the reinforcement, ensuring complete coverage of the metal and the formation of a continuous and adherent layer. It is essential that the slurry is carefully distributed even in less accessible areas to ensure effective and homogeneous protection against corrosion. The application must be carried out in two successive coats: the first coat serves for impregnation and adhesion to the metal substrate, while the second allows for the necessary protective thickness and continuity of the anti-corrosive film. The second coat must be applied when the first is hardened but still slightly damp, or in any case within times that guarantee perfect adhesion between the layers.

During application, it is important to avoid excessive material accumulation and ensure uniform distribution along the entire surface of the bars.

Before proceeding with the application of repair mortars from the Drykos Repair System® line, it is necessary to wait for the product to harden completely. Under standard conditions, the waiting time is approximately 6-8 hours at normal temperatures (~ +20/+25 °C). The hardened product must appear as a continuous, adherent layer free of discontinuities. During application and in the initial stages of hardening, avoid unfavorable environmental conditions such as temperatures below +5 °C, risk of frost, rain, or high humidity, which could compromise the effectiveness of the treatment.

Drykos® **Renov Steel** constitutes the first layer of the concrete restoration cycle and must always be covered with suitable structural mortars from the Drykos Repair System® line to ensure the long-term protection of the reinforcement and the durability of the intervention.

Tool cleaning

Clean tools with water immediately after use. Hardened product can only be removed mechanically.

Other indications

- Do not apply to metal surfaces that are not adequately cleaned or are oxidized
- Do not apply at temperatures below +5 °C or in freezing conditions
- Do not dilute beyond the recommended limits
- Apply the product within the pot life
- Wait for complete hardening before proceeding with restoration
- Protect the fresh product from rain and atmospheric agents
- For anything not covered, contact Technical Support at +39 0171 1874992 or write to info@drykos.com



TECHNICAL PERFORMANCE

Characteristic	Test method	Standard requirements	Performance
Density	EN 1015-6		1700 kg/m ³
Mixing water			32-40%
Compressive strength at 24 hours	EN 196-1		10 N/mm ²
Compressive strength at 28 days	EN 196-1		35 N/mm ²
Flexural strength at 24 hours	EN 196-1		3 N/mm ²
Flexural strength at 28 days	EN 196-1		8 N/mm ²
Corrosion resistance	EN 15183		Pass
Pull-out resistance of high-bond steel bar	EN 15184		Pass
Tensile adhesion	EN 1542		2.4 N/mm ²
Reaction to fire	EN 13501-1		Class A1
CAM - Total recycled material content	UNI PdR 88		≥ 12%

ENVIRONMENT AND SAFETY

VOC

Very Low Emission.

Safety

For information and advice on safety, handling, storage, and disposal, users of the product must refer to the most recent version of the Safety Data Sheet, which provides information on the physical, ecological, and toxicological characteristics of the product. If necessary, request the updated Safety Data Sheet by contacting Customer Service at +39 0171 1874992 or writing to info@drykos.com. Product compliant with the requirements of Regulation (EC) No. 1907/2006 (REACH) and Annex XVII, entry 47 and subsequent amendments and additions.

Use

For professional use.



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WARRANTIES AND LEGAL NOTES

Should the product be defective, the liability of Drykos S.r.l. shall be limited solely to its replacement. The information and instructions in this technical data sheet regarding the application and end-use of the products are provided in good faith and reflect current scientific and technical knowledge; however, they do not constitute any guarantee or assumption of liability regarding the final outcome of the work involving their use. Given the variety of operating conditions and external factors beyond the control of Drykos S.r.l. during execution, it is the user's responsibility to verify the product's suitability for the specific application, assuming all risks and liabilities. Drykos S.r.l. reserves the right to modify the properties of its products at any time. Always refer to the most recent version of the product's technical data sheet. This edition cancels and replaces all previous versions. The latest updated technical data sheets are available on our portal at www.drykos.com.



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