GROVE® RIPRISTINO

Fiber-reinforced mortar for Concrete Restoration CE Marked, in compliance with EN 1504-3

Description
GROVE RIPRISTINO is a fiber-reinforced mortar with normal setting time and compensated shrinkage, suitable for restoring missing parts on degraded concrete elements.
It is ideally suited for realizing very thick layers in just one coat.
Once fully cured, the applied mortar exhibits considerable mechanical strength and weathering resistance.
This product can be admixed with GROVE RIPRISTINO component B (liquid) instead of mixing water, to increase adhesion, flexural strength and water resistance.
GROVE RIPRISTINO meets the requirements defined by ENV 1504-9 ("Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and evaluation of conformity. General principles for the use of products and systems") and the requirements of the European standard EN 1504-3 ("Structural and non-structural Repair") for class R3 structural mortars. General principles for the use of products and systems") and the requirements of the European standard EN 1504-3 ("Structural and non-structural repair") for structural mortars of class R3.

Uses
GROVE RIPRISTINO can be used to:
- compensate the missing parts of concrete during the restoration phases of terraces and balconies rises, cornices casting works, columns and beams, floors, steps, both in the civil and industrial sector;
- for finish filling on various industrial and service infrastructure;
- to create the cove joints between walls and floor in tanks, foundation walls, etc;
- to make iron covers for spacers in foundation walls reinforced with wooden formworks.

Advantages
The product exhibits high compressive strength and adhesion to the substrate.
It can be applied with thicknesses up to 5 cm in a single coat.
It has anti-shrinkage characteristics.

Application
How to Prepare the Substrate
- thoroughly clean and remove all loose particles;
- brush or sandblast any existing reinforcing bar uncovered during the preparation phase and pretreat the day before with 2 coats of CEM-OX;
- generously wet the laying surface and apply GROVE RIPRISTINO to the already hardened CEM-OX.

When realizing coves and iron covers over the spacers:
- wet the surface thoroughly and directly proceed with the application of the product.

Mixture Preparation
Mix one bag of GROVE RIPRISTINO with about 4 to 4.5 liters of clean water (cool in summer) and mix slowly with a drill and an impeller for solids at low rpm (rotor whip), or in a mixer for adhesives, until a lump free mixture with the right consistency is achieved.
Product Application
Apply with a trowel to any part to be restored until the desired thickness is obtained and which, however, in two coats shall not be greater than approx. 10 cm.
As soon as the mortar starts to set, proceed with floating using a sponge.
Surface Finishing
After completing the reconstruction of the missing part,
if you want a finer and smoother finish, apply a coat of GROVE RASANTE and a finish with a small sponge float.
Curing the Product
During hot weather it is imperative to cure the product by wetting the treated area for at least 48 hours after application.

How to Clean the Tools

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Tools with fresh product on them shall be cleaned with water; if the product has hardened, it must be mechanically removed.

Coverage
To obtain approx.1 cm thickness of dry product approx. 19 kg of product shall be used per each square meter.

Warnings
- Apply at a temperature between +5 / +35°C.
- Pay particular attention to the directions on how to take care of the product and cure it during the most unfavorable seasons of the year.
- Do not apply in thicknesses lower than 1 cm.
- During the setting phase do not remix the product adding water.

Colour
The product is available in gray.

Specifications

PRODUCT IDENTITY DATA			
class according to EN 1504-3		----	R3
typology		----	CC
consistency		----	dust
maximum grain size, EN 12192-1		mm	2.5
content of chloride ions - minimum requirement ≤ 0.05% - EN 1015-17		%	≤ 0.05
PRODUCT APPLICATION DATA (at +20°C and 50% RH)			
mixing water		%	16-18
hardened bulk mass		kg/m^3	2,100
application temperature		°C	from +5 to +35
mixture life duration		min	60
applicable thickness (per coat)		mm	from -10 to +50
maximum thickness applied (two coats)		mm	100
FINAL PERFORMANCE (in accordance with the requirements of EN 1504-3)			
compressive strength, EN 12190	after 7 days	MPa	≥ 25
compressive strength, EN 12190	after 28 days	MPa	≥ 35
flexural strength, UNI-EN 196-1	after 28 days	MPa	9
secant modulus of elasticity in compression, EN 13412	after 28 days	GPa	≥ 23
adhesion on concrete (MC 0.40 type support - according to EN 1766), EN 1542	after 28 days	MPa	> 2
resistance to carbonation, EN 13295		----	PAST
capillary absorption, EN 13057		kg/m2·h$^{0.5}$	< 0.05
thermal compatibility measured as bonding (EN 1542) after 50 cycles of freeze-thaw by immersion in de-icing salts, EN 13687/1		MPa	> 2
Cr (VI) soluble in water, EN 196-10		mg/l	≤ 0.02
reaction to fire		Euroclass	A1

* Test not required for the CE marking according to EN 1504-3.
Note: The test method refers to regulations as indicated on the table

Packaging and storage

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Packaging	25 kg bag in 48 bags pallets
Storage	12 months in its original packaging, in a covered and dry place. At temperatures between +5°C and+35°C. This product is moisture sensitive.

Legal notice
Tips on how to use our products match the current state of our knowledge and do not imply any assumption of responsibility or/and liability for the final result of works. Therefore, customers are not exempt from the responsibility to verify the suitability of products for use and final aims through preliminary tests. The website www.nordresine.com contains the latest revision of this datasheet.

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