

# Biocalce Rinzafo

Certified, natural mortar containing pure NHL 3.5, EN 459-1 compliant lime for highly breathable, rough-coat rendering of masonry.

Biocalce Rinzafo is specifically intended for levelling and grip-coating before final plastering/rendering. Highly breathable and saline-resistant, also ideal for preparing masonry affected by rising damp.



## Rating 4

1. Natural, porous and highly breathable, allows walls to breath
2. Superior grip on all types of masonry
3. Evens out the level and absorption of the wall

- ✓ Pollution Reduced
- ✓ Bacteriostatic
- ✓ VOC Low Emission
- ✓ CO<sub>2</sub> Emission ≤ 250 g/kg
- × Recycled Regional Mineral ≥ 30%

## Natural Ingredients

	Pure NHL 3.5 certified natural lime		Siliceous Washed Natural River Sand (0,1-1 mm)
	Certified micronized natural pozzolan		Coarse grain Dolomitic limestone (0.5-3 mm)
	Siliceous Washed Natural River Sand (0,1-0,5 mm)		Mineral geo-binder

## Areas of application

### → Use

Breathable rough coat for interior and exterior hollow clay block, brick, tufa, stone, and mixed-material load-bearing masonry structures and infill masonry, before the application of Biocalce plasters.

Biocalce Rinzafo is particularly well suited to create levelling rough coats and undercoats in Edilizia del Benessere in which the all-natural ingredients guarantee compliance with the required levels of porosity, hygroscopicity and breathability.

Biocalce Rinzafo is suitable for promoting the adhesion of breathable BIOCALCE plasters to

stone/cobblestone and deteriorated substrates in Historic Restoration, where the choice of traditional materials such as natural lime, natural pozzolan, stone, marble and granite, mixed in carefully studied proportions, guarantees conservative interventions in full respect of the existing structures and original materials.

Do not use on substrates which are dirty, non-cohesive, powdery or on previous paint coats and finishing coats. Remove interstitial salt scaling from surfaces.

## Instructions for use

### → Preparation of substrates

The substrate must be clean and solid, free from loose debris, dust and mould. Clean the surfaces using hydro-sandblasting or sandblasting followed by a pressure washer to remove all remaining traces of previous processes (lime putty coverings, old finishing coats, saline formations, etc.) that may impair adhesion. Remove inconsistent rendering mortars from between the stones. Biocalce Rinzafo can also be used with the fragment-filling and/or break-fill techniques to rebuild missing sections of the wall and restore an even surface. Always wet substrates before applying a rough coat.

### → Preparation

Manual application: to prepare Biocalce Rinzafo, mix one 25 kg bag with about 4.8 l of clean water. The mixture is obtained by pouring water into the container and then gradually adding the powder. The mixing process can be performed in a cement mixer, in a bucket (working manually or with a low-rev, mechanical stirring device) or using a continuous mixer until a smooth and lump-free mortar is obtained. Use all of prepared mixture; do not reuse it in subsequent mixings. Store the

product in places protected against the heat in summer months and against the cold during the winter. Use running water not subject to the influence of outside temperatures.

Adding cement in any quantity would impair the quality of the mortar which is guaranteed by its all-natural origins.

Mechanized application: Biocalce Rinzafo has the same fine grain and plasticity of the best natural hydraulic limes, making it ideal for applications using a plaster sprayer. The excellent consistency of the wet product gained WTA certification, also extended to mechanized application. Tests to prove the compliance of Biocalce Zoccolatura with WTA specifications were carried out using a plaster sprayer and the following accessories: Mixer, Stator 30, Rotor 30+, Turbo-stator, Turbo-rotor, rotoquirl worm mixer, 25x37 mm flexible hoses, length 10/20 m and spray gun.

### → Application

Biocalce Rinzafo can be easily applied with a trowel or spray like a normal rough coat mortar. Apply the rough coat so that it partially covers surfaces of clay block walls (full, hollow or channelled flat tile) or fully covers tufa, mixed

## Instructions for use

material or non-absorbent walls.

Apply Biocalce Rinzafo by spraying with precision directly onto clean and previously damped substrates in a single coat. Always check adhesion of the rough coat before plastering/rendering. This traditional system of application prevents the formation of micro-cracks in subsequent plaster layers. Patch layers should be done once the rough coat has hardened. Allow the hardened product to cure and keep it moistened during the first 24 hours.

→ Cleaning

Biocalce Rinzafo is a natural product and tools can be cleaned with water before the product hardens.

## Special notes

- Externally, provide for a separation between the floors, walkways or horizontal surfaces in general, to avoid possible capillary draw phenomena.
- Mix Biocalce Rinzafo into a soft consistency

but in line with the indicated amount of water, making sure that too much is not used as this could considerably reduce adhesion.

- Always wait for Biocalce Rinzafo to harden before applying any subsequent plaster coats.

## Certificates and marks



\* Émission dans l'air intérieur Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

## Abstract

In Edilizia del Benessere (Building for Wellness), a large-grain rough mortar coat is created to prepare interior and exterior walls using exclusively natural raw materials such as pure 3.5 NHL 3.5 and mineral geo-binder, natural micronized pozzolan, inert siliceous sand and Dolomitic limestone materials with a granulometric curve of 0-2.5 mm, and GreenBuilding Rating 4 such as Biocalce Rinzafo.

The required characteristics, obtained exclusively through the use of raw materials of all-natural origin, guarantee total resistance to salts (Table 1 – ASTM C 1012-95a  $\leq 0.034\%$ ).

The rough mortar coat must also meet the requirements of standard EN 998/1 – GP / CS III / W1, adhesion 0.7 N/mm<sup>2</sup>, A1 fire classification class.

The rough coat must be a suitable thickness to correct uneven areas, substrate absorption, and applied in a single rustic-finish anchoring layer, applied by hand or using a plastering machine.

Coverage Biocalce Rinzafo:  $\approx 15 \text{ kg/m}^2$  per cm of thickness.

<b>Technical Data compliant with Kerakoll Quality Standard</b>		
Type of mortar	general purpose rendering/plastering mortar (GP)	EN 998-1
Chemical nature of binder	pure Natural Hydraulic Lime NHL 3.5	EN 459-1
Grading	0 – 2.5 mm	EN 1015-1
Apparent density of powder	≈ 1.34 kg/dm <sup>3</sup>	UEAtc
Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity	
Pack	25 kg bags	
Mixing water	≈ 4.8 l / 1 x 25 kg bag	
Consistency of wet mortar	≈ 197 mm	EN 1015-3
Apparent density of wet mortar	≈ 1.85 kg/dm <sup>3</sup>	EN 1015-6
Apparent density of dry, hardened mortar	≈ 1.66 kg/dm <sup>3</sup>	EN 1015-10
pH of the mixture	≥ 12	
Temperature range for application	from +5 °C to +35 °C	
Minimum thickness obtainable	≈ 5 mm	
Coverage	≈ 15 kg/m <sup>2</sup> per cm of thickness	

Values taken at +20 ± 2 °C, 65 ± 5% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

<b>Performance</b>			
<b>VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions</b>			
Conformity	EC 1 plus GEV-Emicode	GEV certified 2747/11.01.02	
<b>Active INDOOR AIR QUALITY (IAQ) - Dilution of indoor pollutants *</b>			
	Flow	Dilution	
Toluene	137 µg m <sup>2</sup> /h	test failed	JRC method
Pinene	150 µg m <sup>2</sup> /h	+5%	JRC method
Formaldehyde	3281 µg m <sup>2</sup> /h	+5%	JRC method
Carbon dioxide (CO <sub>2</sub> )	77 mg m <sup>2</sup> /h	+10%	JRC method
Humidity (Humid Air)	23 mg m <sup>2</sup> /h	+6%	JRC method
<b>Bioactive INDOOR AIR QUALITY (IAQ) - Bacteriostatic action **</b>			
<i>Enterococcus faecalis</i>	Class B+ no proliferation	CSTB method	
<b>Bioactive INDOOR AIR QUALITY (IAQ) - Fungistatic action **</b>			
<i>Penicillium brevicompactum</i>	Class F+ no proliferation	CSTB method	
<i>Cladosporium sphaerospermum</i>	Class F+ no proliferation	CSTB method	
<i>Aspergillus niger</i>	Class F+ no proliferation	CSTB method	
<b>HIGH-TECH</b>			
Water vapour permeability coefficient (µ)	≤ 20	EN 1015-19	
Water absorption through capillary action	W1 category	EN 998-1	
Depth of water infiltration	1 h ≥ 5 mm	EN 1015-18	
Depth of water infiltration	24 h ≥ 20 mm	EN 1015-18	
Reaction to fire	class A1	EN 13501-1	
Compressive strength after 28 days	CS III category	EN 998-1	
Adhesion to support (hollow clay block)	≥ 0,7 N/mm <sup>2</sup> - FP: B	EN 1015-12	
Resistance to sulphates (Table 1 ≤ 0.034%)	exceeded	ASTM C 1012-95a	
Thermal conductivity (λ <sub>10° dry</sub> )	0.83 W/(m K) (table value)	EN 1745	
Specific heat capacity (Cp)	1.62 (106 J/m <sup>3</sup> K) measured with heat exchange analyser		
Durability (freeze/thaw)	evaluation based on regulations applicable to mortar in the country of use	EN 998-1	
Radioactivity index	I = 0.145	UNI 10797/1999	

Values taken at +20 ± 2 °C, 65 ± 5% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

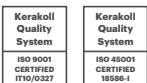
\*Tests carried out according to JRC method - Joint Research Centre - European Commission, Ispra (Varese, Italy) - to measure the reduction of polluting substances in indoor environments (Indoortron Project). Flow and speed in proportion to a standard cement-based plaster/render (1.5 cm).

\*\*Tests carried out according to CSTB method, bacterial and fungal contamination

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# Warning

- Product for professional use
  - abide by any standards and national regulations
  - protect surfaces from direct sunlight and wind
  - allow the hardened product to cure and keep it moistened during the first 24 hours
- if necessary, ask for the safety data sheet
  - for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516 - [globalservice@kerakoll.com](mailto:globalservice@kerakoll.com)



The Rating classifications refer to the GreenBuilding Rating Manual 2013. This information was last updated in July 2023 (ref. GBR Data Report – 07.23); please note that additions and/or amendments may be made over time by KERAKOLL SpA; for the latest version, see [www.kerakoll.com](http://www.kerakoll.com). KERAKOLL SpA shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building site and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.