Biocalce Rinzaffo

WTA-certified, breathable mortar based on NHL 3.5 natural hydraulic lime for rough coating of masonry.



Biocalce Rinzaffo is specifically designed for bonding and levelling rough coats and undercoats prior to plastering/rendering on all types of masonry. Thanks to its high resistance to salts and its breathability, it is ideal for preparing substrates subject to moisture rising; once suitably cured, it helps prevent the migration of salts from the masonry into the still-fresh dehumidifying plaster/render, thus preserving the performance of the protective cycle over time.

1. **Cement-free, suitable for historical restorations**
2. **Advanced pozzolanic behaviour with Min3Ra Technology**
3. **WTA certified**
4. **High resistance to salts and excellent bonding capacity**
5. **Ensures the evenness and absorption of the substrate are uniform**
6. **Reduces formaldehyde (standard ISO 16000-23)**
7. **Bacteriostatic and fungistatic product (standard ISO 846 A/B/C)**
8. **For internal and external use**

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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 Rinzaffo is particularly suitable for levelling and bonding rough coats and undercoats in Building for Wellness, ensuring compliance with the key parameters of porosity, hygroscopicity and breathability – essential elements for creating a healthy environment.
Biocalce Rinzaffo is suitable for promoting the adhesion of breathable Biocalce plasters/renders to stone/cobblestone and deteriorated substrates in historic restoration, where the choice of traditional materials such as natural lime guarantees conservative interventions in full respect of the existing structures and original materials. WTA-certified, it is normally used in the restoration cycle to prevent contact between fresh plaster/render and salt-rich masonry. When left to cure, it therefore prevents the migration of salts into the fresh plaster/render, preserving its dehumidifying function over time.
WTA-certified, Biocalce Rinzaffo is ideal for preparing substrates subject to moisture rising; once suitably cured, it helps prevent the migration of salts from the masonry into the still-fresh dehumidifying plaster/render, thus preserving the performance of the protective cycle over time.

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 Rinzaffo 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 Rinzaffo, 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.
Mechanical application: Biocalce Rinzaffo has the same 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 Rinzaffo with WTA specifications were carried out using a plaster sprayer and the following accessories: Mixer, Stator 30, Rotor 30+, rotoquirl worm mixer, 25x37 mm flexible hoses, length 10/20 m and spray gun.

→ Application
Biocalce Rinzaffo can be easily applied with a trowel or spray like a normal rough coat mortar. Apply Biocalce Rinzaffo to completely cover all surfaces to be treated, leaving the surface rough. Apply Biocalce Rinzaffo 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. Once the first preparatory coat has completely cured, check that there are no dark, damp patches. Any surface

Instructions for use

salt efflorescence or deposits must be removed by brushing. If necessary, repeat the application in areas that are still damp or prone to salt efflorescence, after removing any surface salts. Allow the hardened product to cure and keep it moistened during the first 24 hours.

→ Cleaning
Residual traces of Biocalce Rinzaffo can be removed from tools using water before the product hardens.

Special notes

→ When working outdoors, leave sufficient space at the base of the plaster/render from floors, walkways or horizontal surfaces in general subject to water splash and/or temporary standing water, in accordance with standard UNI EN 13914-1.
→ Mix Biocalce Rinzaffo 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 Rinzaffo to harden before applying any subsequent plaster coats.
→ Biocalce Rinzaffo is a non-pigmented natural hydraulic lime product, hence the colour may vary from production batch to batch.
→ Furthermore, being a mineral product, the colour of the hardened, dried mortar will vary depending on substrate absorption and weather conditions during application.

Certificates and marks

CE EN 998-1 NATURAL PLASTER · NHL 3.5 EN 459-1 NATURAL HYDRAULIC LIME · RENOVATION WTA NATURAL GRIP-COATING MORTAR · ISO 16000-23 FORMALDEHYDE REDUCTION TESTED · ISO 846:2019 METHOD A/B/C NATURAL BACTERIOSTATIC AND FUNGISTATIC · GEV-EMICODE EC 1 PLUS VERY LOW EMISSION · eco Base · EPD-IES-0035126 environdec.com

EMISSIONS DANS L'AIR INTÉRIEUR* A+ (A+ A B C)

** 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

Bonding and levelling rough coats and undercoats prior to plastering/rendering will be applied using a breathable mortar based on NHL 3.5 natural hydraulic lime, suitable for all types of interior and exterior hollow clay block, brick, tuff, stone, and mixed-material load-bearing masonry structures and infill masonry, such as Biocalce Rinzaffo by Kerakoll.
Certified technical characteristics of the rough coat: the mortar is CE-marked according to standard EN 998/1 – GP/CSIII/W1, adhesion 0.7 N/mm², resistance to salt according to standard ASTM C 1012-95a ≤ 0.034% (table I – test passed), reaction to fire class A1, volatile organic compound emissions EC1 Plus GEV-Emicode-certified, bacteriostatic and fungistatic according to standard ISO 846 A/B/C, helps to reduce formaldehyde according to standard ISO 16000-23, compliant with the CAM - (Minimum Environmental Criteria) requirements of paragraphs 1.3.2, 2.6.3, 3.2.4, 2.1.2, 2.6.6, 2.3.17, 2.5.4, 2.4, 2.4.1, 3.2.6 and 3.2.2 of the Italian Ministerial Decree 24/11/2025, with EPD environmental certification according to standards ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021. Certified in accordance with the WTA Merkblatt 2-9-20/D guidelines (plasters/renders for restoration and repair).
Coverage Biocalce Rinzaffo: ≈ 15 kg/m² per cm of thickness.

Technical Data compliant with Kerakoll Quality Standard		
Type of mortar	general purpose rendering/plastering mortar (GP)	EN 998-1
Chemical nature of binder	natural hydraulic lime NHL 3.5	EN 459-1
Grading	0 – 2.5 mm	EN 1015-1
Apparent density of powder	≈ 1.34 kg/dm³	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	≈ 1.87 kg/dm³	EN 1015-6
Apparent density of dry, hardened mortar	≈ 1.69 kg/dm³	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/m² 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.

Performance relating to indoor environmental quality			
VOC – Volatile organic compound emissions			
Conformity	EC 1 plus GEV-Emicode		GEV certified 2747/11.01.02
Formaldehyde reduction – standard ISO 16000-23			
The product helps to reduce formaldehyde levels			
Dilution of indoor pollutants *			
	Flow	Dilution	
Toluene	137 µg m²/h	na	JRC method
Pinene	150 µg m²/h	+5%	JRC method
Formaldehyde	3281 µg m²/h	+5%	JRC method
Carbon dioxide (CO_2)	77 mg m²/h	+10%	JRC method
Humidity (Humid Air)	23 mg m²/h	+6%	JRC method

*Tests carried out in-house in accordance with a test method developed in collaboration with the JRC: 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 finishing product (3 mm).

HIGH-TECH

Performance characteristic	Test methods	Requirements of EN 998-1	Performance
Compressive strength after 28 days	EN 1015-11	Reference class	CS III
Substrate adhesion	EN 1015-12	None	≥ 0.7 Mpa – FP:B
Water absorption through capillary action	EN 1015-18	categories	W1
Depth of water infiltration (1 hour)	EN 1015-18	Value	1 h ≥ 5 mm
Depth of water infiltration (24 hours)	EN 1015-18	Value	24 h ≥ 20 mm
Water vapour permeability coefficient (µ)	EN 1015-19	Declared value	µ ≤ 20
Thermal conductivity ($\lambda_{10,\ dry}$)	EN 12667	table value	0.83 W/mK
Specific heat capacity (Cp)	measured with heat exchange analyser		1.62 (10^6 J/m³K)
Durability (freeze-thaw)	998-1		evaluation based on regulations applicable to mortar in the country of use
Reaction to fire	EN 13501-1	Euroclass	A1

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

Warning

→ 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

Kerakoll Quality System ISO 9001 CERTIFIED IT10/0327

Kerakoll Quality System ISO 45001 CERTIFIED 18586-I

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