Biocalce Intonaco

WTA-certified, plaster/render based on NHL 3.5 natural hydraulic lime for highly breathable plastering/rendering.

Biocalce Intonaco is suitable for the breathable, protective plastering/rendering of internal and external brick, tuff, stone, and mixed-material load-bearing masonry structures and infill masonry.



1. **Cement-free, suitable for historical restorations**
2. **Advanced pozzolanic behaviour with Min3Ra Technology**
3. **High breathability**
4. **Reduces formaldehyde (standard ISO 16000-23)**
5. **Bacteriostatic and fungistatic product (standard ISO 846 A/B/C)**
6. **For internal and external use**

kerakoll

Areas of application

→ Use
Breathable, protective plaster/render for interior and exterior hollow clay block, brick, tufa, stone, and mixed-material load-bearing masonry structures and infill masonry. Biocalce Intonaco is particularly suitable for plastering/rendering in Building for Wellness, ensuring compliance with the key parameters of porosity, hygroscopicity and breathability – essential elements for creating a healthy environment.

Biocalce Intonaco is suitable for plastering/rendering on breathable masonry; the choice of traditional materials such as natural lime guarantees conservative interventions that fully respect 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. Use Biocalce Muratura and 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 the plaster.

→ Preparation
Manual application: to prepare Biocalce Intonaco, mix one 25 kg bag with about 5.1 l of clean water in a standard concrete mixer. Mix by pouring water into the clean cement mixer and then add the powder in one operation. Wait until the right consistency forms while mixing. In the first 1-2 minutes the product will seem dry; do not add water at this stage. Keep mixing for 4-5 minutes until a smooth, spongy and lump-free mortar forms. 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.

→ Application
Mechanized application: Biocalce Intonaco 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 Intonaco with WTA specifications were carried out using a plaster sprayer and the following accessories: Mixer, Stator 30, Rotor 30+, 25x37 mm flexible hoses, length 10/20 m and spray gun.
Biocalce Intonaco can be easily applied with a trowel or spray like a normal plaster/render. Prepare the substrate, filling in any fragments if necessary to create a flat, smooth surface. Apply the rough coat, create the levelling layers, plaster, strike off then float as the product hardens.
Biocalce Intonaco should be applied with precision, each coat being no more than 2 cm thick even though the product lends itself easily to form thicker coats. This traditional system of application prevents the formation of micro-cracks. Only apply patch layers on rough or previous coats when the lower has hardened. The finishing will depend on the technique selected. Allow the hardened product to cure and keep it moistened during the first 24 hours.

→ Cleaning
Tools can be cleaned with water before the product hardens.

Special notes

→ When plastering walls of different ages, or walls with sections that have been clad in different materials, we recommend inserting a galvanized or synthetic anti-alkali plaster-reinforcing mesh into the Biocalce Intonaco to rule out any chance of cracking.
→ When applying Biocalce Intonaco to compact or non-absorbent substrates, always apply a layer of Biocalce Rinzaffo first then check adhesion.
→ 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.
→ Biocalce Intonaco is a non-pigmented natural hydraulic lime product, hence the colour may vary from production batch to batch.
→ Walls made of cellular concrete blocks should be prepared as indicated by the manufacturer: do not dampen or rough cast these surfaces. Prepare them before plastering by applying Biocalce Fondo consolidant-absorption unifier with a brush or roller.
→ Furthermore, when working on cellular concrete walls, always insert Rinforzo V 50 reinforcing mesh between the two coats of finishing product, made with either Biocalce Intonachino Fino or Granello.

Certificates and marks

CE EN 998-1 NATURAL PLASTER
NHL 3.5 EN 459-1 NATURAL HYDRAULIC LIME
RENOVATION WTA NATURAL TEXTURED UNDERCOAT PLASTER
ISO 16000-23 FORMALDEHYDE REDUCTION TESTED
ISO 846:2019 METHOD A/B/C NATURAL BACTERIOSTATIC AND FUNGISTATIC
GEV-EMICODE EC1 PLUS VERY LOW EMISSION
eco Base
EPD-IES-0035055 environdec.com

ÉMISSIONS 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

Breathable, protective plastering/rendering for interior and exterior hollow clay block, brick, tuff, stone, and mixed-material load-bearing masonry structures and infill masonry will be carried out using a plaster/render based on NHL 3.5 natural hydraulic lime such as Biocalce Intonaco by Kerakoll.
Certified technical characteristics of the breathable plaster/render: the mortar is CE-marked according to standard EN 998/1 – GP / CS II / W1, adhesion 0.2 N/mm², co-efficient of resistance to water vapour μ ≤ 6, porosity of the hardened mortar ≥ 40%, thermal conductivity 0.54 W/mK, degree of occluded air during mixing ≥ 20%, 0–2.5 mm grading, 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 Intonaco: ≈ 13 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	≈ 1.28 kg/dm³	UEAtc
Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity	
Pack	25 kg bags	
Mixing water	≈ 5.1 l / 1 x 25 kg bag	
Consistency of wet mortar 0’	≈ 174 mm	EN 1015-3
Apparent density of wet mortar	≈ 1.63 kg/dm³	EN 1015-6
Apparent density of dry, hardened mortar	≈ 1.45 kg/dm³	EN 1015-10
pH of the mixture	≥ 12	
Occluded air / plastering machine occluded air	≥ 20%	EN 413-2
Temperature range for application	from +5 °C to +35 °C	
Maximum thickness obtainable by coat	≈ 2 cm	
Coverage	≈ 13 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 2752/11.01.02
Formaldehyde reduction – standard ISO 16000-23			
The product helps to reduce formaldehyde levels			
Dilution of indoor pollutants *			
	Flow	Dilution	
Toluene	253 µg m²/h	+69%	JRC method
Pinene	347 µg m²/h	+144%	JRC method
Formaldehyde	6437 µg m²/h	+106%	JRC method
Carbon dioxide (CO_2)	398 mg m²/h	+467%	JRC method
Humidity (Humid Air)	43 mg m²/h	+100%	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	Anforderungen nach DIN EN 998-1	Performance
Compressive strength after 28 days	EN 1015-11	Reference class	CS II
Substrate adhesion	EN 1015-12	None	≥ 0.2 Mpa – FP:B
Water absorption through capillary action	EN 1015-18	categories	W1
Water vapour permeability coefficient (µ)	EN 1015-19	Declared value	µ ≤ 6
Thermal conductivity ($\lambda_{10,\ dry}$)	EN 12667	table value	0.54 W/mK
Specific heat capacity (Cp)	measured with heat exchange analyser		1.45 (106 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

This information was last updated in November 2026; please note that additions and/or amendments may be made over time by KERAKOLL SpA; for the latest version, see 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 of 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.

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