

Geocalce Intonaco

Certified, breathable plaster/render made from pure natural NHL lime and geo-binder – Class CS II. Specific for restoration of brick, stone, mixed material, tuff and masonry structures. Ideal as plaster/render for high-thickness finish in certified structural reinforcement, improvement and seismic adaptation systems.

Geocalce Intonaco is a CS II resistance class geo-mortar according to EN 998-1, for procedures on highly breathable walls.



Rating 5

1. **Health and safety**
The first breathable lime-based structural mortars that ensure high permeability to vapour. Used in combination with Kerakoll strengthening systems, they increase the mechanical resistance of the existing walls in order to improve the structural safety of the building.
2. **Low elastic modulus**
Thanks to the use of NHL lime and the geo-binder, the Geocalce range features a low elastic modulus that creates a perfect balance with characteristic strengths typical of masonry structures of all types.
3. **Culture and tradition**
The Geocalce range respects and satisfies the needs of applications on buildings subjected to Historical Restoration of Environmental and Architectural Heritage buildings and on traditional buildings.
4. **Bacteriostatic and fungistatic product (CSTB method)****

- ✓ Active Pollution Reduced
- ✓ Bioactive Bacteriostatic
- ✓ VOC Very Low Emission
- ✓ CO₂ ≤ 250 g/kg
- ✓ Recycled Mineral ≥ 30%

kerakoll

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

Natural Ingredients

	Pure NHL 3.5 certified natural lime		Siliceous Washed Natural River Sand (0.1 – 1 mm)
	Mineral geo-binder		Selected Dolomitic Limestone (0 – 1.4 mm)
	Siliceous washed natural river sand (0.1 – 0.5 mm)		Pure Fine White Carrara Marble (0 – 0.2 mm)

Areas of application

→ Intended use:

Geocalce Intonaco is a breathable geomalta, protective rendering of internal and external brick, tuff, stone and mixed-material load-bearing masonry structures and infill masonry. Geocalce Intonaco is ideal as plaster/render in Historical Restoration, in which the all-natural components guarantee compliance with the crucial levels of porosity, hygroscopicity and breathability required.

Geocalce Intonaco is especially well suited as plaster/render for high-thickness finish on certified Kerakoll structural reinforcement and seismic upgrade systems.

Do not use on substrates which are dirty, non-cohesive, powdery, on old paint layers, plasters/renders or finishing coats and salt scaling.

Instructions for use

→ Preparation of substrates

The substrate must be clean and solid, free from loose debris, dust and mould. Clean the surfaces by sand-blasting or sanding until achieving a surface roughness equal to level 5 – 8 of the test kit for preparation of reinforced concrete and masonry substrates. Subsequent power washing to remove all residue from previous operations which could impair adhesion. Remove inconsistent rendering mortars from between the stones. Use Geocalce F Antisismico or Geocalce G Antisismico 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 product.

free consistency is achieved. Use all of prepared mixture; do not reuse it in subsequent mixings. Use running water not subject to the influence of outside temperatures. Do not add other components (binders or generic inert materials) to the mix.

Geocalce Intonaco has the same plasticity of the best natural limes, making it ideal for applications using a plaster sprayer. Tests to prove the compliance of Geocalce Intonaco were carried out using a plaster sprayer and the following accessories: Mixer, Stator/Rotor D6-3, 25x37-mm flexible hoses, 10-20 m long and spray gun. Geocalce 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. Then wet until it is fully saturated, leaving a saturated substrate with no excess water on the surface.

→ Preparation and application

To prepare Geocalce Intonaco, mix one 25-kg bag using clean water, in the amount shown on the package, 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-

→ Cleaning

Geocalce Intonaco is a natural product and tools can be cleaned with water before the product hardens.

Special notes

- On non-homogeneous substrates apply a rough coating as needed to even out uneven sections and substrate absorbencies, and arrange for inclusion of a plaster-reinforcing mesh in order to rule out any chance of cracking.
- Walls made using cellular concrete blocks must be prepared in compliance with the manufacturer's directions. Application of

- Biocalce Fondo consolidant-absorption unifier with a brush or roller is recommended.
- Externally, provide for a separation between the floors, walkways or horizontal surfaces in general, to avoid possible capillary draw phenomena.

Certificates and marks

S-P-01134 EPD®
environdec.com



CSTB
le futur en construction



* 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

Creation of very high breathability plaster/render for internal and external walls with pure NHL 3.5 natural-lime-based mortar and geo-binder, and siliceous sand inert materials and Dolomitic limestone in 0 - 1.4 mm granulometric curve, GreenBuilding Rating 5 (such as Geocalce Intonaco). The required characteristics, obtained exclusively through the use of raw materials of all-natural origin, make the plaster extremely breathable (co-efficient of resistance to water vapour ≤ 15), with natural thermal conductivity (equal to 0.54 W/(m K)). The natural plaster must also meet the requirements of standard EN 998/1 - GP / CS II / W1, adhesion ≥ 0.1 N/mm², A1 class reaction to fire. The plaster/render will be no thicker than 15 mm per coat. To be applied by hand or using a plastering machine. Coverage Geocalce Intonaco: ≈ 13 kg/m² per cm of thickness.

Technical Data compliant with Kerakoll Quality Standard

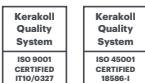
Appearance	Powder	
Aggregate mineral content	silicate - carbonate	
Grading	0 – 1.4 mm	
Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity	
Pack	25 kg bags	
Mixing water	≈ 5.3 l / 1 x 25 kg bag	
Apparent density of wet mortar	$\approx 1,50$ kg/dm ³	EN 1015-6
Apparent density of dry, hardened mortar	$\approx 1,35$ kg/dm ³	EN 1015-10
Temperature range for application	from +5 °C to +35 °C	
Maximum thickness obtainable by coat	≈ 1.5 cm	
Coverage	≈ 13 kg/m ² per cm of thickness	

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

Performance		
VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions		
Conformity	EC 1 plus GEV-Emicode	GEV certified 7828/11.01.02
Active INDOOR AIR QUALITY (IAQ) - Dilution of indoor pollutants *		
	Flow	Dilution
Toluene	213 µg m ² /h	+42%
Pinene	367 µg m ² /h	+158%
Formaldehyde	5540 µg m ² /h	+77%
Carbon dioxide (CO ₂)	385 mg m ² /h	+449%
Humidity (Humid Air)	39 mg m ² /h	+81%
Bioactive INDOOR AIR QUALITY (IAQ) - Bacteriostatic action **		
<i>Enterococcus faecalis</i>	Class B+ no proliferation	CSTB method
Bioactive INDOOR AIR QUALITY (IAQ) - Fungistatic action **		
<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
HIGH-TECH EN 998-1		
Water vapour permeability coefficient (µ)	≤ 15	EN 1015-19
Water absorption through capillary action	W0 category	EN 998-1
Porosity	≥ 40%	WTA 2-2-91/D
Reaction to fire	class A1	EN 13501-1
Compressive strength after 28 days	CS II category	EN 998-1
Adhesion to support (hollow clay block)	≥ 0.1 ≥ 0.1 N/mm ² - FP: B	EN 1015-12
Thermal conductivity (λ10, dry)	0.54 W/(m K) (table value)	EN 1745
<small>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</small>		

Warning

- Product for professional use
- abide by any standards and national regulations
- store the product in places protected against the heat in summer months and against the cold during the winter
- protect the surfaces from air currents
- 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



The Rating classifications refer to the GreenBuilding Rating Manual 2012. This information was last updated in March 2022 (ref. GBR Data Report - 03.22); please note that additions and/or amendments to this information 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 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.