

# Biocalce® Marmorino

**Certified, eco-friendly, natural plaster based on selected pure CL 90-S lime putty compliant with EN 459-1 standard and containing natural coloured soils, ideal for use in GreenBuilding and Historical Restoration. Bacteriostatic and fungistatic product. Contains raw materials of only natural origin, provides natural ventilation to improve indoor air quality, safeguards the health of both operators and the environment.**

Biocalce® Marmorino is suitable for the highly breathable decoration of conventional and restoration plaster and render coats; it can be applied to new mineral coats, to well-preserved aged and marble-effect plaster and render coats (patch layers/restoration) and to cornices, pilasters and ornate surfaces.



**GREENBUILDING RATING®**

**Biocalce® Marmorino**  
 - Category: Inorganic Natural Semi-fluids  
 - Mortars, plasters/renders and natural decoration

Rating based on average colour formulations

Highly effective (5/5)	No development of bacteria or fungi	Non-toxic and non-hazardous	No environmental hazard rating	

**PRODUCT STRENGTHS**

- Allows walls to breath
- Ideal for ensuring healthy interior living spaces for a greater psychophysical wellbeing
- Outdoors, it gives new façades a traditional, aged look
- Ideal for restoration projects in historical centres
- Bacteriostatic and fungistatic product (CSTB method)\*\*

**NATURAL INGREDIENTS**

	Pure CL90 lime putty
	Natural earth powder pigments and coloured minerals

**AREAS OF USE**

**Use**  
 Coloured breathable mineral plaster for the decoration of conventional and restoration plaster/render coats. Biocalce® Marmorino is particularly well suited to achieve decorations of high aesthetic quality in Edilizia del Benessere® (Building for Wellness) in which the all-natural ingredients guarantee compliance with the required levels of breathability.  
 Biocalce® Marmorino is suitable for decoration in Historical Restoration projects, where the choice of traditional materials such as natural lime, natural coloured earths and minerals, mixed in carefully-studied proportions, guarantees conservation interventions in full respect of the existing structures and original materials.  
 Biocalce® Marmorino can be applied to:

- new plasters/renders made of lime putty, lime putty and natural hydraulic binder, hydraulic lime with low index of hydraulic properties, common lime and reactive cocchiopesto (crushed brick), common lime-pozzolan and/or reactive pozzolans.
- well-preserved old plasters/renders
- well-preserved old marble-effect finishes (patch layers - restoration)
- cornices, pilasters and ornaments, as a finishing layer
- traditional plasters, on gypsum or plasterboard previously treated with Biocalce® Fondo Universale

**Do not use**  
 On wet substrates (not cured); on substrates which are dirty, non-cohesive, powdery. On previous paint coats or lime putty coverings. On walls subject to capillary moisture rising without prior application of dehumidifying plasters/renders.

\* 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).

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

## INSTRUCTIONS FOR USE

### Preparation of substrates

The substrate must be cured, clean and solid, free from loose debris, dust and mould. Old plasters must adhere to the masonry structure and must be damage-free, dry, carefully cleaned to remove remaining traces of previous processes (lime putty coverings, old finishing coats, etc.) and suitably finished using products from the Biocalce® Intonachino finishing line according to the level of finish and smoothness of the plaster.

Apply Biocalce® Fondo Universale before applying Biocalce® Marmorino to indoor surfaces coated with gypsum, plasterboard or synthetic paints. Leave to dry and apply a first coat of Biocalce® Marmorino.

Preparation of new or old substrates helps save time and colour product, guaranteeing a superior quality decorative layer.

Particular care must be taken during summer and when working in direct sunlight: provide shade cloths.

To even up the absorption in old or inconsistent substrates use one or more coats of Biocalce® Fondo according to the absorption found, leave to dry and apply a first coat of Biocalce® Marmorino.

For the treatment of substrates other than those mentioned and for additional information on the types of intervention to be carried out, we recommend to consult Kerakoll's Guide to decorating and preparing substrates.

### Preparation

The feature of Biocalce® Marmorino is that it can be used to decorate outdoor and indoor render/plaster, in a number of coats according to the level of finish and the chromatic effect required, using the wet-on-wet method, that is to say applying the second coat, and any subsequent coats, when the preceding coat is still wet but dust free. This simple application procedure allows the grains present in the lime putty to be incorporated in the first coat, giving a layer with an even thickness and a smooth surface.

Mix in advance working manually or with a low-rev, mechanical stirring device until a smooth paste is obtained.

Under no circumstances must more water be added to the mix during application.

### Application

Biocalce® Marmorino can be applied easily using a stainless steel spreader, making sure it is evenly distributed; the last coat must be applied with particular care, smoothing repeatedly with a stainless steel float or suitable tools while the product is drying, so as to create a compact, smooth, translucent and vibrant surface typical of marble-effect finishes.

Each layer is to be applied approximately 1 mm thick.

Biocalce® Marmorino is pigmented exclusively with natural earths, so there may be slight differences in colour between one batch and the next and slight chromatic variations in the final result according to the level of absorption in the supports or variable atmospheric conditions during application.

### Cleaning

Biocalce® Marmorino is a natural product and tools can be cleaned using water before the product hardens.

## SPECIAL NOTES

Apply Biocalce® Marmorino at temperatures from +8 °C to +30 °C and relative ambient humidity lower than 80%. In the event of strong wind, do not apply the product. When the product is applied externally the scaffolding must be protected with suitable cloths to protect it from direct sunlight, wind and rain, until the product has cured completely.

Carbonation is affected by weather conditions; at low temperatures and with high relative humidity it may be responsible for longer curing times.

During the carbonation process, the resultant presence of calcium hydroxide, following washouts by rainwater or contact with liquid water, can give rise to difficult-to-remove, unattractive stains or insoluble droplets. High environmental humidity, condensation and roughness of the support can favour the deposit of dust, spores and other sources of nourishment; they may generate the surface growth of micro-organisms and thus altering the aesthetic qualities of the finish.

Particular care must be taken when carrying out decorations over full backgrounds. Avoid interruptions between scaffolding levels or on large continuous surfaces.

When applying internally it is recommended that the rooms be well aired for a few days after application, to promote hardening of the binder by carbonation.

The product may show differences in shade on not suitably-prepared substrates.

## ABSTRACT

*In Edilizia del Benessere® (Building for Wellness) and Historic Restoration highly hygroscopic and breathable decorative layers are created on internal and external plaster/render using natural plaster containing natural coloured earths and pure lime putty (such as Biocalce® Marmorino), with stucco type surface finishing level, naturally ventilated to help dilute indoor pollutants, naturally bacteriostatic and fungistatic, GreenBuilding Rating® 4\*\*.*

*After wetting the support, apply Biocalce® Marmorino in several coats using a stainless steel float, until the required aesthetic effect is achieved.*

*Always prepare the substrates using products from the Biocalce® Intonachino range of finishing products.*

*Biocalce® Marmorino coverage: ≈ 1.7 kg/m<sup>2</sup> at a thickness of 1.5 mm.*

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

## TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Type of mortar	lime putty and natural earths
Chemical nature of binder	CL 90-S calcium lime putty
Shelf life	≈ 12 months from production in the original sealed packaging
Warning	protect from frost, avoid direct exposure to sunlight and sources of heat
Pack	25 kg buckets
Temperature range for application	from +8 °C to +30 °C
Maximum thickness obtainable	1.5 mm
pH on packaging	≈ 12
Volumetric mass (specific weight) at +20 °C	≈ 1.67 kg/ℓ
Vapour permeability (Sd)	≤ 0.027
Cortical carbonation (days x 1 mm thickness)	≈ 30
Coverage per m <sup>2</sup> (kg/m <sup>2</sup> at a thickness of 1.5 mm)	≈ 1.7 kg

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

### ACTIVE INDOOR AIR QUALITY (IAQ) - DILUTION OF INDOOR POLLUTANTS \*

	Flow	Dilution	
Toluene	217 µg m <sup>2</sup> /h	+127%	JRC method
Pinene	369 µg m <sup>2</sup> /h	+122%	JRC method
Formaldehyde	7568 µg m <sup>2</sup> /h	+15%	JRC method
Carbon dioxide (CO <sub>2</sub> )	346 mg m <sup>2</sup> /h	+249%	JRC method
Humidity (Humid Air)	59 mg m <sup>2</sup> /h	+250%	JRC method

### BIOACTIVE INDOOR AIR QUALITY (IAQ) - BACTERIOSTATIC ACTION \*\*

Enterococcus faecalis	Class B+ no proliferation	CSTB method
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### BIOACTIVE INDOOR AIR QUALITY (IAQ) - FUNGISTATIC ACTION \*\*

Penicillium brevicompactum	Class F+ no proliferation	CSTB method
Cladosporium sphaerospermum	Class F+ no proliferation	CSTB method
Aspergillus niger	Class F+ no proliferation	CSTB method

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 exterior paint (0.5 mm).

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

## WARNING

- **Product for professional use**
- abide by any standards and national regulations
- always wet substrates before application
- do not add water during application
- screen/shield the scaffolds with appropriate in order protect from sun, wind and rain during the application and in the maturation phase
- 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 November 2020 (ref. GBR Data Report - 12/20); 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 yards 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.



**KERAKOLL**  
The GreenBuilding Company

KERAKOLL S.p.a.  
Via dell'Artigianato, 9 - 41049 Sassuolo (MO) Italy  
Tel +39 0536 816 511 - Fax +39 0536 816 581  
[info@kerakoll.com](mailto:info@kerakoll.com) - [www.kerakoll.com](http://www.kerakoll.com)