

Biocalce Silicato Puro Pittura

Certified, eco-friendly, natural wall paint based on pure stabilized potassium silicate, with natural coloured earths and minerals.

Biocalce Silicato Puro Pittura is a natural, breathable coloured paint for the decoration of conventional render coats, for restoration and more generally, for use on all mineral substrates based on hydraulic binders. Naturally protected with pine oil according to DIN 18363.



Rating 3

1. Naturally breathable, allows walls to breath
2. Bacteriostatic and fungistatic classified B+ e F+ (CSTB method)*
3. Naturally protects facades that are particularly exposed
4. Ideal for restoration projects in historical centres

- ✓ Pollution Reduced
- × VOC Low Emission
- ✓ Bacteriostatic
- ✓ Health Care
- × Low Ecological Impact

Natural Ingredients



Pure potassium silicate



Natural earth powder pigments and coloured minerals



Pine oil



Pure Fine White Carrara Marble (0 – 0.5 mm)

With less than 5% added organic emulsion, as required under DIN 18363

Areas of application

→ Use

Coloured breathable mineral paint for the decoration of conventional render coats, for restoration, and more generally, for use on all mineral substrates based on hydraulic binders. Biocalce Silicato Puro Pittura 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 and permeability to water vapour, guaranteeing effective protection from atmospheric and environmental agents at the same time.

Biocalce Silicato Puro Pittura is suitable for decoration in Historical Restoration projects, where the choice of traditional materials such

as pure potassium silicate, natural coloured earths and minerals, mixed in carefully-studied proportions, guarantees conservation interventions in full respect of the existing structures and original materials.

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.

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 gypsum-based substrates. On walls subject to rising damp without prior application of dehumidifying renders.

Instructions for use

→ Preparation of substrates

The substrate must be cured, clean and solid, free from loose debris, dust and mould.

New plasters must be suitably scratched and finished with render from the Biocalce line to guarantee the best functional and aesthetic results when applying mineral paint finishes.

Old plaster 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 if necessary also finished using fine plasters from the Biocalce line according to the level of finish and smoothness of the plaster.

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

It is necessary to apply a preparation coat, again with a potassium silicate base, such as Biocalce Silicato Consolidante, to improve strength and promote silication of the subsequent Biocalce Silicato Puro Pittura mineral decorative layer.

To even up absorption on surfaces made up of different materials, after consolidation, it is necessary to apply a thin layer of pure potassium

silicate, Biocalce Silicato Fondo Fino, to guarantee that the subsequent paint layer will have an even colour. Biocalce Silicato Fondo Fino does not alter the finish of the surfaces.

When it is necessary to even up absorption and at the same time improve the even or compactness of the surface it is preferable to use Biocalce Silicato Fondo, a thin layer of pure silicate with natural lamellar fillers and fibre with a filling effect, applied in one or more layers according to the level of coverage required.

→ Preparation and application

Apply Biocalce Silicato Consolidante approximately 12 hours before the silicate-based cycle. Wait for at least 12 hours between all the subsequent layers foreseen in the cycle.

Biocalce Silicato Puro Pittura can be applied both externally and internally in several coats according to the level of coverage and chromatic effect required.

For external applications, Biocalce Silicato Puro Pittura must be diluted with Biocalce Silicato Consolidante, at a ratio of 25% by volume, for the first and second coats.

Instructions for use

In case of use on external surfaces, dilute Biocalce Silicato Fondo with 10 – 15% Biocalce Silicato Consolidante and add 10 – 15% water depending on the degree of absorption of the substrate and the tools used.

For internal surfaces Biocalce Silicato Puro Pittura may be diluted using clean water at a ratio of 25% by volume for the first and second coats.

Biocalce Silicato Puro Pittura can be applied with ease using a brush alone, taking care to apply the colour using crossed, irregular strokes.

Biocalce Silicato Puro Pittura 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.

For glaze-effect decoration, dilute the product at a ratio of 1:1 with Biocalce Silicato Consolidante.

→ Cleaning

Biocalce Silicato Puro Pittura is a natural product and tools can be cleaned using water before the product hardens.

Special notes

- Apply Biocalce Silicato Puro Pittura 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 sheets to protect it from direct sunlight, wind and rain during the first 72 hours, to allow the silication process to take place properly.
- At temperatures of below +15 °C, in very damp (> 80%) or misty conditions, the decorative layer requires a longer time (8 - 15 days) to cure completely and finish the silication process. This time may vary according to the environmental conditions.
- Unprotected masonry: surfaces exposed to the direct action of rain must be protected against direct percolation of rainwater, at least until the decorative coating is completely cured, in order to prevent dripping or surface crystallization.
- 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 silication.
- Given the purity of the Biocalce Silicato Puro Pittura formula and its high alkalinity, adjacent surfaces must be protected during application. Contact with silicate products can damage urban furniture and glass, ceramic, natural stone, terracotta and metals.
Any splashes of product must be removed immediately with clean water.
- On intense shades, it is recommended to apply the product without interruption, wet on wet, in order to avoid signs of recoating.
Touch-ups may vary depending on various factors and may be visible even after the product has dried.
- On dark colours a blackboard effect may be visible when fingers are rubbed on the wall after the product has dried completely.
- 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.
- In misty conditions and when the substrate presents a high degree of environmental moisture, yellowish/transparent, slightly shiny and sticky droplets could form after application of the product; they are caused by the water-soluble surfactants present in the product. This phenomenon can be eliminated by washing the walls or simply waiting for repeated rain. The characteristics of the film and the degree of protection are not altered by this phenomenon. Should a further application of the product be carried out, it will be necessary to thoroughly wash the walls, and apply a preventive coat of Biocalce Silicato Fondo. This phenomenon does not occur in stable climatic conditions.
- Any whitening or differences in colour due to water percolation on the walls are not attributable to a manufacturing defect but to the mineral nature and natural characteristics of the product.

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) and Historic Restoration a highly breathable decorative layer, protected with pine oil compliant with DIN 18363, is created on internal and external plaster using paints containing natural coloured earths and pure potassium silicate (such as Biocalce Silicato Puro Pittura), naturally ventilated to help dilute indoor pollutants, bacteriostatic and fungistatic, GreenBuilding Rating 4**. Apply Biocalce Silicato Puro Pittura using brushes alone, taking care to distribute the product evenly and with care. Apply the product in a minimum of two coats, or more according to the level of coverage required, on substrates that have first been finished with products in the Biocalce Intonachino finishing line treated with Biocalce Silicato Consolidante.*

Coverage of Biocalce Silicato Puro Pittura (on fine-grain plaster finishing coat): $\approx 0.15 - 0.25 \text{ l/m}^2$ for two coats of the product.

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

Technical Data compliant with Kerakoll Quality Standard

Appearance	white or coloured paste	
Chemical nature of binder	pure potassium silicate/organic emulsion $\leq 5\%$	DIN 18363
Shelf life	≈ 6 months from production in the original sealed packaging	
Warning	protect from frost, avoid direct exposure to sunlight and sources of heat	
Pack	4 / 14 l buckets	
Temperature range for application	from $+8 \text{ }^\circ\text{C}$ to $+30 \text{ }^\circ\text{C}$	
Waiting time between 1st and 2nd coat	≈ 12 hrs	
Rain interval at $20 \text{ }^\circ\text{C}$ and $\text{RH} \leq 80\%$	at least 72 hrs	
pH on packaging	≈ 12	
Brookfield viscosity RVT6 RPM10	≈ 20000 cps	
Volumetric mass (specific weight) at $+20 \text{ }^\circ\text{C}$	$\approx 1.44 \text{ kg/l}$	
Vapour permeability (Sd)	≤ 0.008	
Coverage on finished substrate with Biocalce Intonachino Fino	$\approx 0.15 - 0.25 \text{ l/m}^2$ for two coats	

Values taken at $+20 \pm 2 \text{ }^\circ\text{C}$, $65 \pm 5\%$ 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	202 µg m ² /h	+111%	JRC method
Pinene	255 µg m ² /h	+54%	JRC method
Formaldehyde	4262 µg m ² /h	test failed	JRC method
Carbon dioxide (CO ₂)	341 mg m ² /h	+244%	JRC method
Humidity (Humid Air)	65 mg m ² /h	+285%	JRC method

Bioactive INDOOR AIR QUALITY (IAQ) - Bacteriostatic action **

<i>Enterococcus faecalis</i>	Class B+ no proliferation	CSTB method
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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

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
- do not dilute during application
- scaffolding must be screened with suitable sheets to protect from sun, wind and rain during application and during the curing period (72 hours)
- we recommend obtaining all the material at the same time
- on large surface areas, gaps must be left around joints, drain pipes, corners and edging, or insert technical joints
- 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 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. 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.