



BIO BETON[®] 500 VENEZIA

Natural thermal plaster
made of lime and hemp



PLASTERS
AND FINISHES



TECNO
CANAPA





Venice represents one of the most complex building environments in existence: historic masonry constantly exposed to humidity, condensation and evaporation cycles, salt presence, and architectural constraints that rule out waterproof or invasive solutions.

BIO BETON® 500 Venezia was developed to work in these extreme conditions, where the goal is not to block humidity, but to manage it over time, helping reduce technical and maintenance risk in restoration work carried out in the presence of persistent humidity and salts.

The same principle has also been successfully applied in other critical contexts, such as:

Basement and semi-basement environments

Historic buildings affected by rising damp

Convent complexes and listed structures



WHAT IS BIO BETON® 500 VENEZIA

BIO BETON® 500 Venezia is a highly breathable natural thermal plaster, designed as a technical base-coat plaster and as a functional layer of the interior building envelope.

✓ It is composed exclusively of:

- Selected fine hemp shiv
- Natural dolomitic lime putty
- Symbiotic microorganisms

✗ Does not contain:

- Cement
- Hydraulic binders
- Mineral aggregates
- Chemical additives

This composition allows the material to work in physical and hygrometric continuity with the masonry, without creating rigid barriers or incompatibilities over time.

ANCIENT MATERIALS, CONTEMPORARY APPROACH

Lime and hemp have been used for centuries for their ability to:



Breathe



Withstand the test of time



Adapt to existing masonry

BIO BETON® 500 Venezia recovers these principles and applies them in a **controlled and repeatable way**, thanks to an industrial production process that ensures quality consistency and reliability.

European Patent EP3121156B1

It is a material:

- traditional in its fundamentals
- contemporary in its control
- consistent with historic buildings and with modern construction.



Thermal insulation



Energy savings



Humidity regulator



Sound-absorbing



Living comfort



Fire resistant



Frost resistant



No insects or mold



Durable over time



Eco-friendly



Carbon negative



Recyclable



HUMIDITY: A VARIABLE TO MANAGE, NOT TO FIGHT

BIO BETON® 500 Venezia works on **relative humidity regulation**, thanks to a porous, hygro-active structure that allows vapor exchange in its gaseous state.

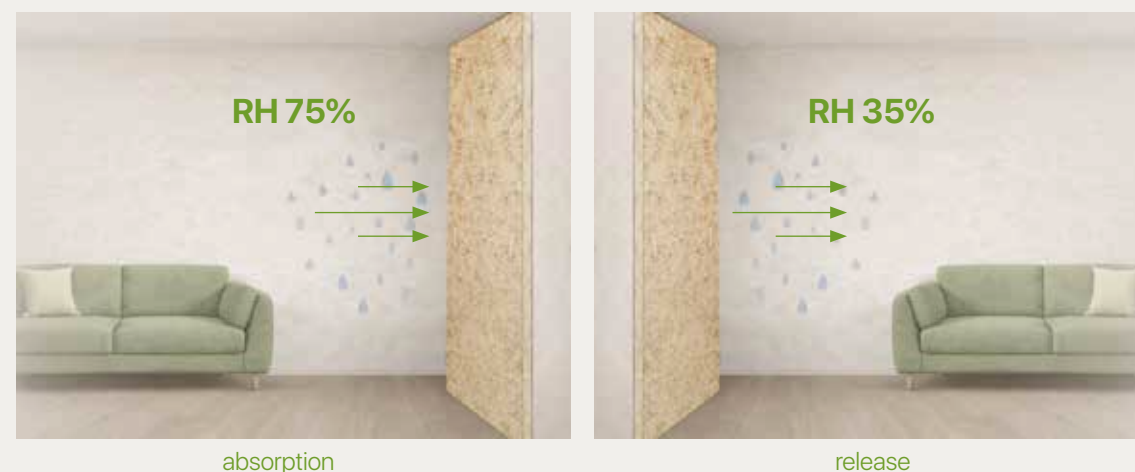
Humidity is not a flaw in itself.
It becomes a problem when it stagnates, condenses or gets trapped
inside the walls.

In practice, the material:

absorbs excess moisture

releases it gradually when
environmental conditions change

helps stabilize the indoor
microclimate



This behavior is known as **hygrometric buffering** and is widely documented in the literature for open-pore hygroscopic natural materials.

LIVING COMFORT AS STABILITY OVER TIME

Living comfort does
not depend on air
temperature alone.

It is the result of the interaction between:

- relative humidity;
- surface temperature of the walls;
- thermal inertia of the materials;
- stability of environmental conditions over time.

BIO BETON® 500 Venezia contributes to comfort because it:

- improves the perceived surface temperature;
- dampens thermo-hygrometric fluctuations;
- reduces surface condensation conditions.

The result is a more stable, natural and livable environment, especially in daily living spaces.



A HISTORICAL REFERENCE: THE ELLORA CAVES

In the **Ellora Caves (India)**, decorated surfaces have been preserved for over 1,500 years in underground environments characterized by:

- high humidity
- absence of modern ventilation
- extreme conditions for materials



Historical sources report the presence of **lime, hemp and clay-based plasters**, capable of maintaining equilibrium over time.

This example is not a performance comparison, but **evidence of the durability of breathable materials** when working in balance with the environment.

MICROCLIMATE AND QUALITY OF INDOOR ENVIRONMENTS

Mold proliferation is favored by the combination of:



By acting on humidity regulation and the surface temperature of walls, BIO BETON® 500 Venezia helps **reduce the conditions favorable** to these phenomena.

The product's advanced formulation includes a **controlled integration of selected symbiotic microorganisms**, inspired by ecological sanitization principles already studied in other fields and used exclusively for environmental purposes, not medical or health-related ones.

The goal is to promote a more balanced and stable microclimate over time.





TECHNICAL PERFORMANCE

Dry bulk density:	500 kg/m³
Thermal conductivity λ:	0.12 W/mK
Water vapor diffusion resistance μ:	4.5
Specific heat:	1330 J/kgK
Compressive strength:	1.4 N/mm²
Adhesion to substrate:	0.02 N/mm²
Reaction to fire:	B-s1-d0

These properties make BIO BETON® 500 Venezia particularly suitable for restoration work, building recovery and improving thermo-hygrometric comfort.



APPLICATION AND FINISHES

BIO BETON® 500 Venezia is supplied ready-to-use and can be applied either by hand or by spray pump.

It is suitable for:

- historic and modern masonry;
- walls affected by rising damp;
- basement and semi-basement environments.

Possible finishes include:

- Canaposo® or Canapulino®: textured hemp and lime finish;
- Stabilitura Naturale Traspirante Plus: exterior-grade plaster finish;
- Fine grassello lime and sand mortar: interior-grade plaster finish

Or it can be left unfinished for a rustic, freehand irregular effect

INSTALLATION TUTORIAL

A guide for installers through the application stages of BIO BETON® 500 Venezia: from preparing critical points, to applying the first coat on substrates with different absorption levels, through to the second coat, compacting and final finishing.



Scan the QR code to watch the video

CERTIFIED HEALTHINESS

BIO BETON® 500 Venezia has obtained Biosafe® Certification, which attests to the product's environmental healthiness through indoor emissivity tests carried out according to the UNI EN 16516 and EN ISO 16000-6 standards. This recognition protects designers, contractors and clients, confirming that the material actively contributes to a healthier, more balanced indoor microclimate free of harmful substances.





IN SUMMARY

BIO BETON® 500 Venezia is a material that:



Manages humidity instead of blocking it



Respects the building's physics



Contributes to indoor comfort and healthiness



Born from ancient principles applied with contemporary rigor

BIO BETON® 500 VENEZIA



**A finish that works with the environment, for
people's wellbeing**





Lavoriamo per il benessere dell'Uomo e dell'Ambiente[®]

SENINI - Via Erculiani 192 - 25018 Novagli di Montichiari - BS

Company Phone: 030 9665711

Toll-Free Number: 800 172 553 - tecnocanapa@senini.it

www.tecnocanapa-bioedilizia.it

MADE IN THE BEAUTIFUL ITALY