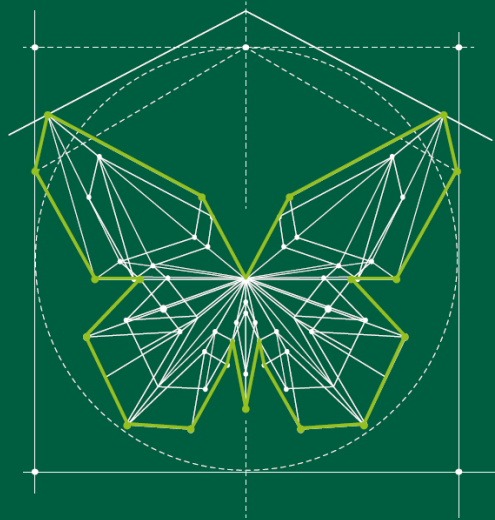


bio-arquitectura

construção sustentável



Ecological mortars and plasters

André Marques (Eng)
assistencia.tecnica@fassabortolo.com
Lisbon, March 17th, 2025



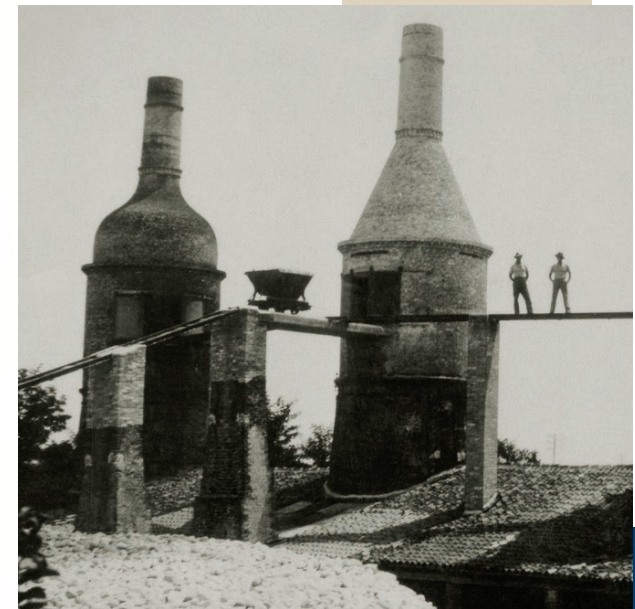
OUR EXPERIENCE

is your guarantee

Fassa Bortolo's tradition stretches back to 1710. Passed down from generation to generation, it has constantly evolved, standing out for innovations which have made an essential contribution to the construction sector.

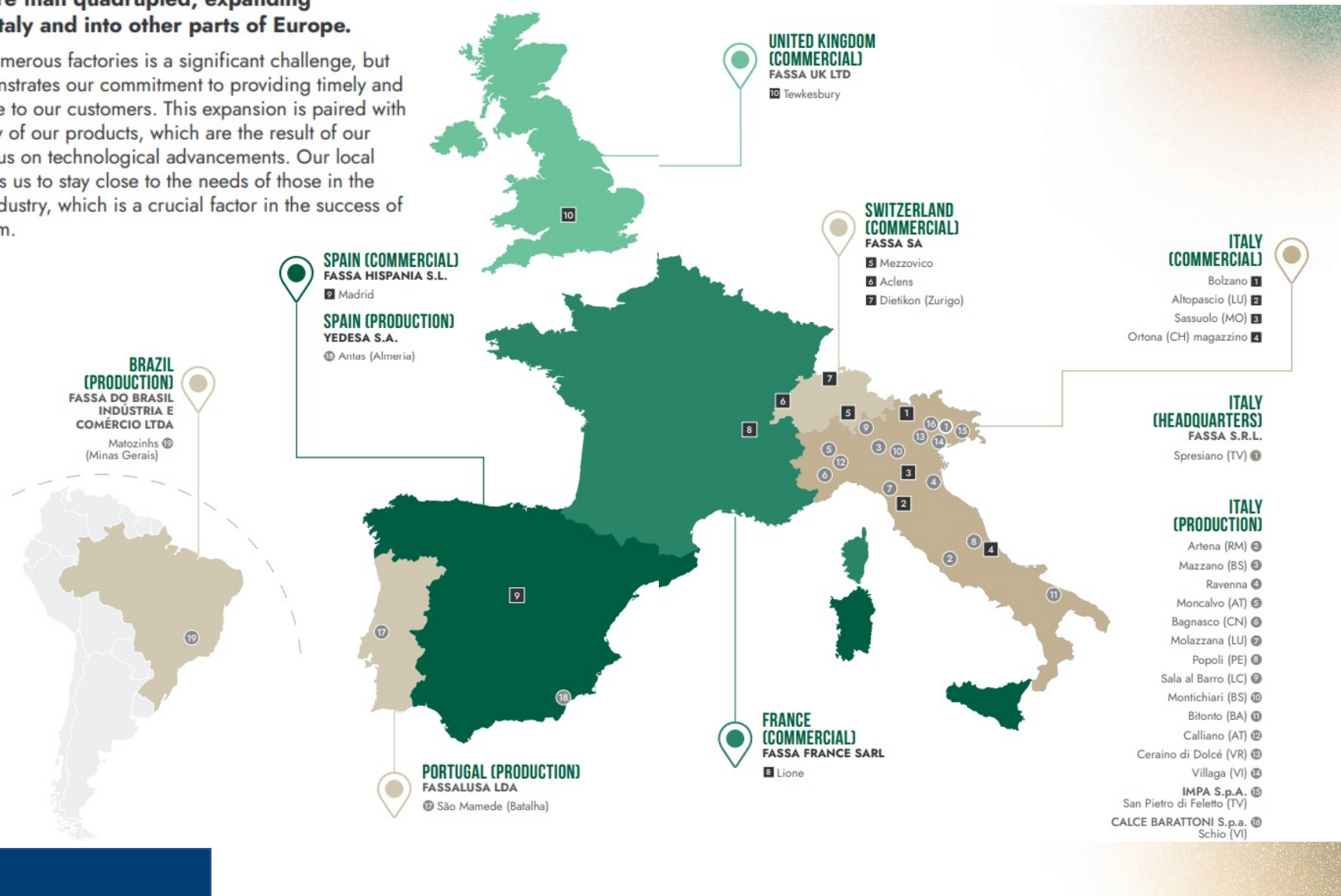
In Italy, it was the first company to introduce premixed lime, cement plasters and renders for all types of building work. It was also the first to develop silos technology, the supply system which revolutionised work on site.

Today, it is a market leader and a reference point for designers, suppliers and the contractors themselves.



Since 2000, the number of Fassa Bortolo production sites has more than quadrupled, expanding throughout Italy and into other parts of Europe.

Establishing numerous factories is a significant challenge, but it clearly demonstrates our commitment to providing timely and efficient service to our customers. This expansion is paired with the high quality of our products, which are the result of our continuous focus on technological advancements. Our local presence allows us to stay close to the needs of those in the construction industry, which is a crucial factor in the success of the Fassa system.



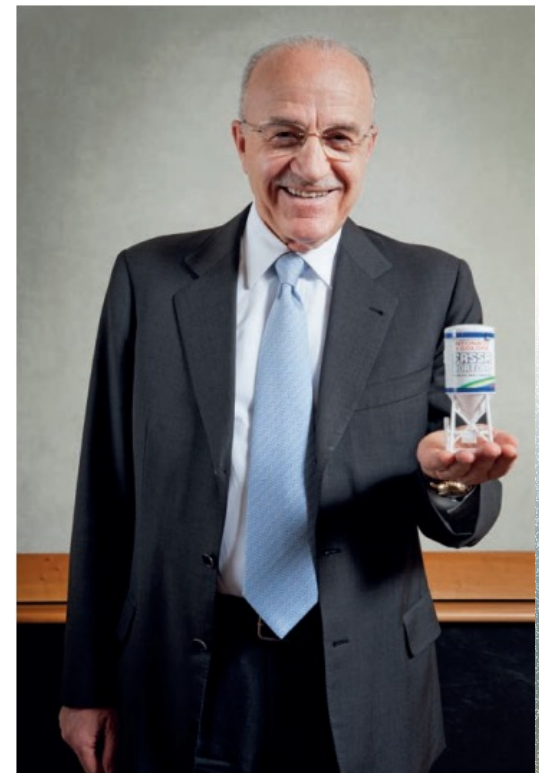
**FASSA
BORTOLO**
QUALIDADE PARA CONSTRUÇÃO



Quality building and living in respect of man and the environment

One philosophy runs through the whole Fassa Bortolo product portfolio: a mission to bring innovations into our working and living surroundings. Developing products and materials with far better performance and improving the physiological well-being of the individual, whilst being in harmony with the environment.

In the last thirty years it has developed a vocation for bio-architecture, starting with one of the raw materials it handles: lime, perhaps the most strategic in a sector with increasingly awareness of sustainability.



Pre-mixed product

Rigor – Quality – Sustainability

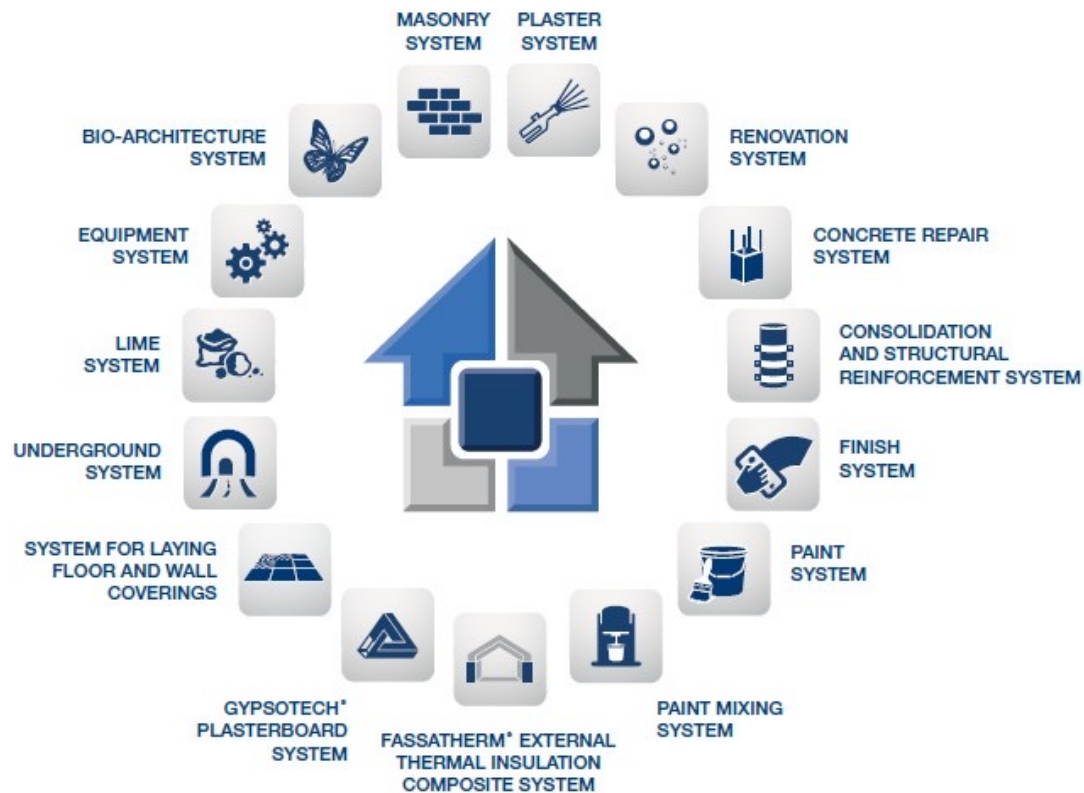
Advantages:

- Greater control of the production;
- Constant quality;
- Performances according to standards;
- Less material waste;
- Cleaning up on site.

Greater efficiency and cost control on site



Integrated system



The Fassa Bortolo Integrated System has all the necessary resources for organized and professional work.

Through a single interlocutor, it satisfies all customer needs, ensuring global supply, support, training and technical assistance.

Carbon Footprint



Life cycle assessment according to the environmental impact generated by the different production processes for:

- **Identify the processes with the biggest impact;**
- **Demonstrate your performance with data that is as objective as possible;**
- **Compensate the CO₂ produced;**
- **Try to reduce emissions at source.**

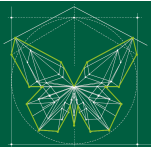
THE RAW MATERIAL THAT ENSURES OUR WELL-BEING

Lime is a binder that has been used in building since ancient times, ideal for making mixtures used in the conservative restoration of ancient walls with an irreplaceable historical and artistic value.

EN 459-1 provides a general definition of the different types of building lime and their classification, as well as the requirements relating to their properties, specifying compliance criteria.

Air lime and hydraulic lime

The main distinction is between air lime and hydraulic lime. While the former hardens in contact with air, the latter hardens even in the presence of water. This difference is due to the composition of the raw materials used. Both types were widely used in construction work even in ancient times.



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THE RAW MATERIAL THAT ENSURES OUR WELL-BEING

Air lime

Lime is obtained by heating materials that contain high quantities of calcium carbonate to high temperatures. At a temperature of at least 900°C , the calcium carbonate decomposes into calcium oxide (so-called “quicklime”) and carbon dioxide. The quicklime is then “slaked” with water, creating calcium hydroxide (slaked lime).

Hydraulic lime

Hydraulic lime is obtained by burning materials that, in addition to calcium carbonate, also contain components such as silicates and aluminates; compared to air lime, the latter give the lime the ability to set and behave as a binder when in contact with water. The burning temperature never exceeds 1100°

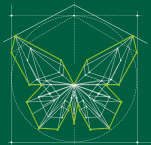
Extractive culture

The best environmental recovery and reuse of the end-of-life quarry area must come at the quarry design stage.



Everything should stay as it was before!





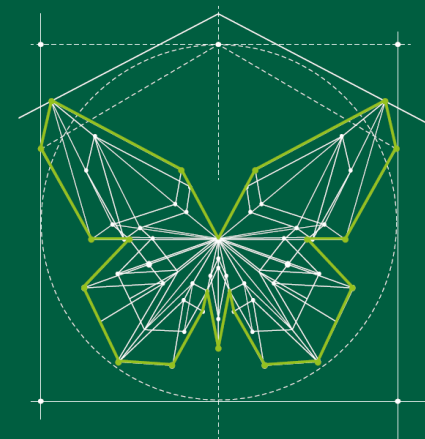
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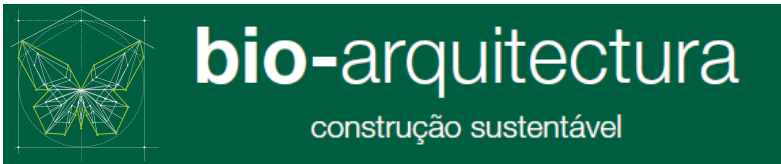
Why use Hydrated Lime (aerial)?

- Vapor permeability
- Workability
- Modulus of elasticity
- Mortar shrinkage
- Appearance of efflorescence
- Appearance of cracks
- Compatibility with the substrate





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Certified quality for the building sector



National Association of Bioecological Architecture



Institute for Ethical and Environmental Certification

- This represents important recognition for our bio-ecological products
- Certifying maximum care paid to the environment and complete compliance with the strictest bioarchitecture criteria
- Fassa Bortolo's Bio-Architecture line was the first line in Europe to **obtain certification with KB 13**, the first plaster certified in 1999, **setting the standards** in the sustainable architecture sector.

MORTAR FOR BRICK WALLS



UNDERCOAT

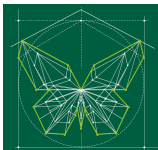


BASECOAT



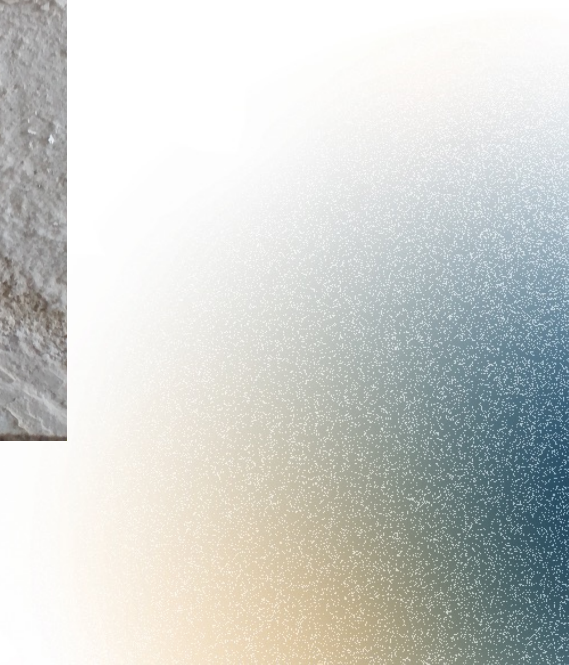
FINISHING





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S 639



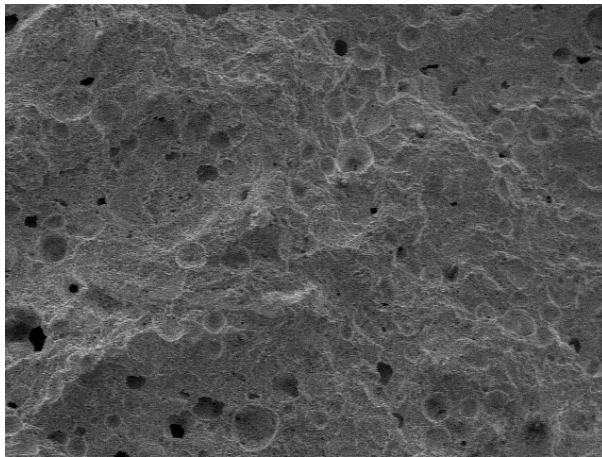
Bio white plaster and render for the restoration of damp masonry, with marmorino effect

S 639 is a dry white plaster/render made from natural lime, sulphate-resistant hydraulic binder, marble powder, graded sands, water-repellent material and specific additives designed to improve workability, adhesion and breathability.

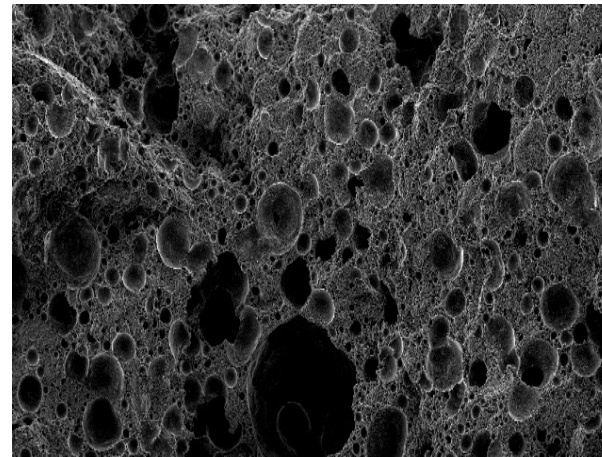
S 639 is used as a base coat plaster/render with application by hand or machine for the restoration of damp masonry.

Dehumidifying system

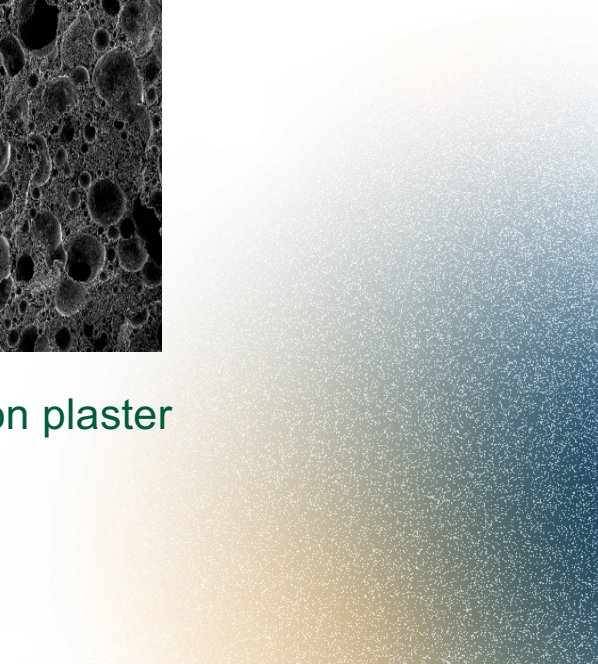
Plaster and render for rising damp – What are they?



Traditional plasters
7% porosity



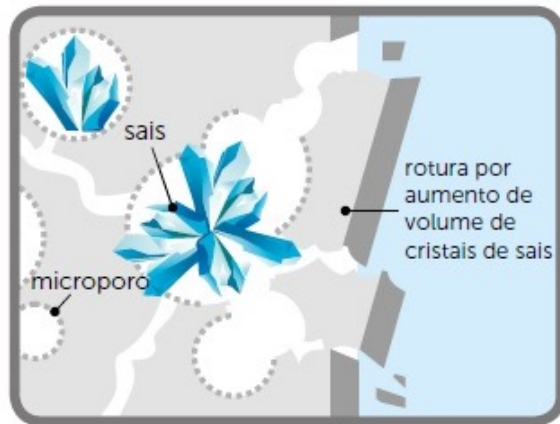
Fassa Porous renovation plaster
25% porosity



Dehumidifying system

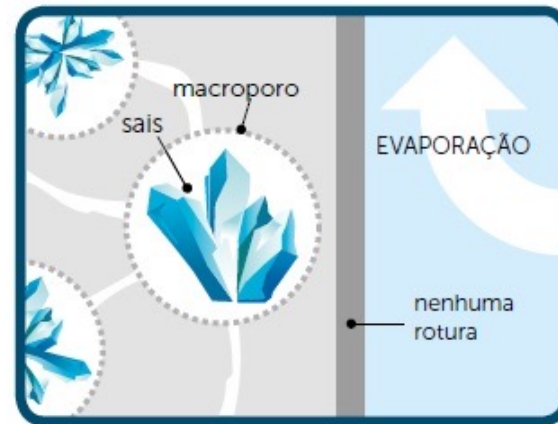
Plaster and render for rising damp – What they do?

✗ Comportamento de um reboco normal



Traditional plasters

✓ Solução com reboco macroporoso Fassa Bortolo



Plaster and render for rising damp

LC7 BIOLISCIO



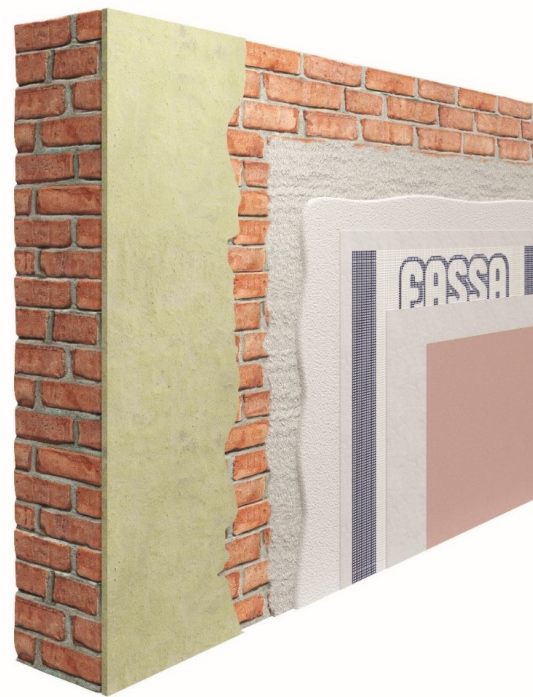
Smooth finish coat plaster and render, cement-free, made from lime and pozzolanic binders

LC7 BIOLISCIO is a premixed mortar in powder form made from lime, pozzolanic binders and very fine natural aggregate. LC7 BIOLISCIO is used for smooth finishing of interior and exterior plastered surfaces. It can also be used to complete dehumidifying plastering cycles, exploiting the principle of macroporosity. It is particularly suitable for air lime (PURACALCE) and natural hydraulic lime plasters (EX NOVO) and in all cases where high breathability is required.

***Contains approx. 20.5% of by-products in its composition**



Dehumidifying system



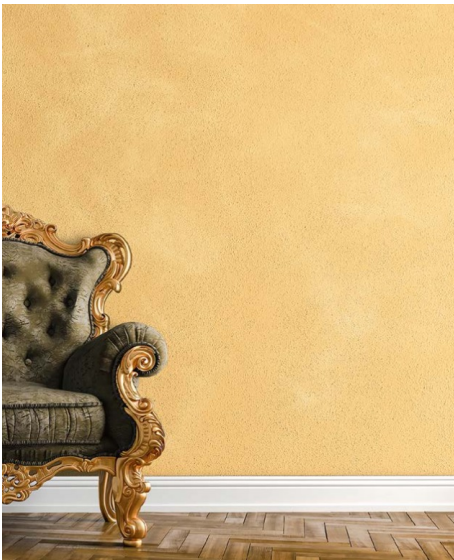
Solution for rehabilitation work



Solution for new construction

SFIDE D'ARTE

A line of decorative finishes – lime based



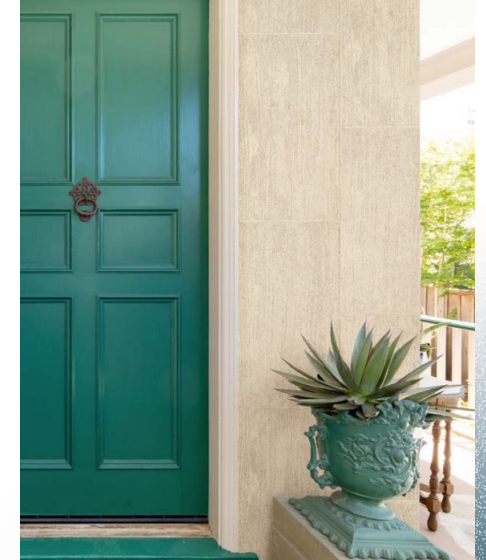
**RICORDI CALCE A
PENNELLO
SA26**



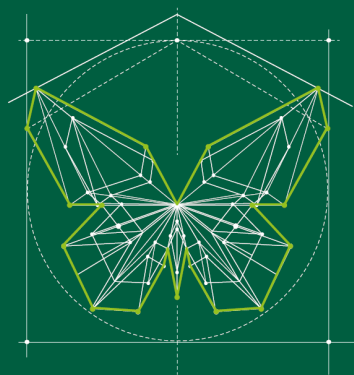
**RICORDI MATERIA
RT10, Efeito cimento**



**RICORDI STUCCO
Base branca 1000**



**RICORDI PIETRA FINE
IN26, Efeito travertino**



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Argamassas e rebocos sustentáveis

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Lisbon, March 17th, 2025

Obrigado pela atenção

