

SECIL  ARGAMASSAS

SECIL
ecoCORK

MORTARS WITH CORK AGGREGATES

SECIL

ecocORK

CONSTRUCTION AND SUSTAINABILITY





The concept of sustainable construction rises from the need to ensure the future generations a sustainable development, promoting the balance of natural, environmental, social, cultural and economical standards.

A sustainable building starts way before it's construction, with the choice of durable and recyclable building materials, preferably of natural origin and that cause the minimum impact possible during its extraction.

There are, in fact, alternatives, that in addition to the low environmental impact, also provide better results in terms of thermal and acoustic insulation of buildings, such as the case of mortars, in which cork aggregates are incorporated. These innovative products, developed by Secil, join durability and resistance of hydraulic binders with a natural and renewable insulator. They also contribute for a reduction in the consumption of raw materials, thanks to its low density.

The final purpose of sustainable construction is to ensure that the consumption of energy, water and materials occurs at a sustainable rate, where it is possible to be renovated, with insignificant environmental impact, maintaining the comfort of modern homes. In economical terms, opting for an investment in a quality, durable and energy efficient construction, will imply lower user-end costs and a higher life span.

The range of SECIL ecoCORK mortars establishes new patterns in material sustainability. Get to know them in detail.

SECIL AND THE ENVIRONMENT

Secil's permanent challenge is to ensure that the group activities are developed in a sustainable way, with an adequate profitability of the capital invested, safeguard of the environment and compliance of their social obligations, ensuring the maintenance of their activity for the future.

The cement factory of Secil - Outão was the first, in Portugal to receive the environmental certificate according to the ISO 14001.

Among the 332 european cement companies still in function, Secil was the fourth to receive this important Environmental Certification.

Since then, and for 30 years, Secil has invested over seven millions Euros in the plantation of around one million autoctone plant species on the Serra d'Arrábida. The majority come from our own nursery garden that the company has created in the factory surroundings.

This permanent investment has earned the company the Environmental Management Award of the European Year for the Environment, in 1987, for the execution of the innovative Plan of Landscape Recovery of Quarries and, more recently, in 2008, with the EMAS (Eco-Management and Audit Scheme) and the concession of the Environmental License, according to the most recent environmental legislation.



BIODIVERSITY AND SUSTAINABILITY

The introduction of the Biodiversity concept which aims for the total recovery of the entire ecosystem, integrating the fauna and flora components and not only the visual impact of the landscape, was one of the most significant changes of Secil's environmental policy.

Energy recovery at Secil-Outão started in 1997. Nowadays, residues such as vegetable biomass, are used as alternative fuels to the petrol derivatives, thus reducing CO2 emissions.

In 2009, Secil achieves the Environmental Innovation for Europe Award (EEP AWARDS 2009) for the project of capturing CO2 and biomass production, through the industrial production of microalgae, in a partnership

with the company AlgaFuel, at our cement factory of Cibra-Pataias.

The company also sponsored the Biomares project evaluated in one million Euros, created for the recovery of the marine prairies surrounding the Portinho da Arrábida, revitalizing also an important marine ecosystem which was condemned to degradation by human interaction.



SECIL ecoCORK



In SECIL's sustainable construction framework and environmental policy, a building materials development plan was created, applicable in our architectural culture and according to the traditional application techniques, with the particularity of using a natural, renewable, durable, recyclable raw material, that would provide an improvement of the thermal and acoustic insulation of buildings, thus increasing energy efficiency.

SECIL PRODUCT RANGE

The mortar range SECIL ecoCORK is the result of this investigation carried out with the cooperation of ITECONS (Institute of Investigation and Technological Development in Building Sciences) who conducted all the tests of characterization of the developed products.

Composed of three distinct products, the SECIL ecoCORK range innovates and distinguishes by the incorporation of cork aggregates in substitution of siliceous or calcareous aggregates, in the production of mortars designed for façade rendering, masonry wall elevation and floor filling and regulation.



Cork is a natural and renewable product, extracted from cork trees every 9 years, in a life cycle that crosses generations and ensures a sustainable environment. These trees might grow up to 25 metres and live up to 300 years.



In Portugal, there are around 750.000 acres of cork tree plantations. It is the biggest extension of cork trees in the world (33% of worldwide area). The species is legally protected, and the cut is prohibited and punished by law.

Cork tree plantations play an important role in the conservation of the soil, preventing its desertification, in the quality of our water and in the production of oxygen.

These are extremely unique Mediterranean ecosystems, which include a very rich and complex biodiversity, unique in Europe.

The management of cork tree plantations along with cork exploration, generate also important revenue on a local and regional scale, allowing people to live and work in rural areas.





The SECIL ecoCORK mortars with incorporation of cork allow a reduction of approximately 80% in volume, of non-renewable aggregates.

Simultaneously, it's low volume density represents a reduction in almost 50% per m³ of its weight in comparison with other normal mortars, thus allowing a much higher productivity on work sites, as well as an economy, on the quantity of building materials used.

The reduction of weight featured by ecoCORK Secil Mortars SECIL over the structure may equally contribute for lightening its dimension.



SECIL ARGAMASSAS PRODUCTS

The range of SECIL ecoCORK products are applicable in the construction and coating of external or internal walls, and in the filling and leveling of internal pavements.

The granulometrics of the cork aggregates may vary according to each application.

ADVANTAGES

- ✓ Products for a sustainable construction
- ✓ High durability
- ✓ Recyclable products
- ✓ Incorporates a natural renewable material
- ✓ Exceptional permeability to water vapour
- ✓ Improves thermal and acoustic performances
- ✓ Improves the dynamic behaviour of constructive solutions
- ✓ Light product (50% reduction in bulk density per m^3 in comparison with traditional mortars)
- ✓ 80% reduction in volume, in the consumption of non-renewable natural aggregates
- ✓ High productivity at work site

RHP ecoCORK

RENDER FOR MECHANICAL SPRAYING WITH CORK AGGREGATES



SOLUTIONS FOR THE COATING OF FAÇADES, WALLS, AND INTERIOR CEILINGS

- Render with improved thermal and acoustic performance, in double layer, on façades, walls and internal walls

TECHNICAL FILE

FIELD OF APPLICATION

Internal and external renderings

SUBSTRATES

Ceramic brick masonry, concrete block and concrete

APPLICATION

Mechanical Spray

APPLICATION THICKNESS

2 a 6 cm (máx. 2,5 cm per layer)

DENSITY

$900 \pm 50 \text{ kg/m}^3$

THEORETICAL CONSUMPTION

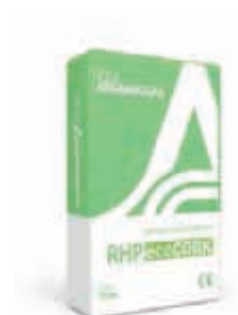
$6,5 \text{ Kg/m}^2/\text{cm}$

THERMAL CONDUCTIVITY

$0,16 \text{ W (m.}^\circ\text{C)}$

PACKAGING

Saco 12 kg



COMPLEMENTARY PRODUCTS

Reabilita RR20 Fine sand finish

SecilTEK PK 06 Smooth finish for interiors

ecoCORK SCREED

LIGHTWEIGHT SCREED
WITH CORK AGGREGATES



FILLING AND LEVELLING SOLUTION FOR PAVEMENTS IN INTERIORS

- Execution of filling and levelling layers in interior pavements with improved thermal and acoustic performances.

TECHNICAL FILE

FIELD OF APPLICATION

Internal pavements

SUBSTRATES

Concrete slabs

APPLICATION

Manual

APPLICATION THICKNESS

4 a 12 cm

DENSITY

$750 \pm 50 \text{ kg/m}^3$

THEORETICAL CONSUMPTION

$5,6 \text{ Kg/m}^2/\text{cm}$

THERMAL CONDUCTIVITY

$0,13 \text{ W (m.}^\circ\text{C)}$

PACKAGING

Saco 12 kg



ecoCORK MASONRY

LIGHTWEIGHT MASONRY MORTAR
WITH CORK AGGREGATES



MASONRY WALL RAISING SOLUTION

- Elevation of masonry walls with improved thermal and acoustic performances

TECHNICAL FILE

FIELD OF APPLICATION

External and internal walls

SUBSTRATES

Ceramic brick and concrete blocks

APPLICATION

Manual or mechanical

DENSITY

$900 \pm 50 \text{ kg/m}^3$

THEORETICAL CONSUMPTION*

See Table

THERMAL CONDUCTIVITY

$0,12 \text{ W (m.}^\circ\text{C)}$

PACKAGING

Saco 12 kg



BRICK	*THEORETICAL CONSUMPTION (kg/m ²)		
	JOINT THICKNESS (cm)		
	1,0	1,5	2,0
7	5,3	7,9	10,5
11	8,3	12,4	16,5
15	11,3	16,9	22,5
22	16,5	24,8	33,0

SECIL ARGAMASSAS

SECIL GROUP

FOUNDED IN 1891 1891, SECIL ARGAMASSAS IS COMPANY WHO DEVELOPS AND PRODUCES NEW CONSTRUCTION MATERIALS.

Part of the Secil Group, Secil Argamassas has always been, throughout its history, a vanguardist company, as a pioneer in the production of Natural Hydraulic Lime and Dry Industrial Mortars in Portugal.

Nowadays, we offer a diversified range of products and solutions that satisfy the high demandings of construction, such as material durability, the technical performance of the solutions, high productivity and the increase in building energy efficiency.

Adhesives ADHERE
Solutions for MASONRY
Solutions for PAVEMENTS
Primers and Additives SECILTEK AD
Solutions for Rendering REDUR E RHP
Mortars TECHNIQUES
REABILITA Renovation Solutions

QUALITY POLICY

Secil Argamassas has implemented a Quality Management System according to the Portuguese Quality Management Standard **NP EN ISO 9001:2008**.

Our activity is focused on the following commitments:

- > Anticipate the changes in the Market and be a pioneer in the sector's modernization
- > Satisfy and exceed necessities and expectations of all entities we interact with
- > Promote efficiency and effectiveness of our QMS aiming at a continuous improvement
- > Conduct our activity in a balanced environment of sustainable development, aiming at a progress, compatible with demand-increasing environmental performance levels





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 **SECIL
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Faz parte da Solução