



# about insulation cork



AMORIM



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100% natural and fully recyclable. In a comparative life cycle analysis, expanded insulation corkboard offers significant advantages from an environmental standpoint. With virtually unlimited durability, it maintains all its features throughout the product's working life.

## cork

Cork, *cortiça* in Portuguese, is the outer bark of the cork oak tree – *Quercus Suber L.* – which has grown for millennia throughout the Mediterranean Region.

The life span of these exceptional trees is between 200 and 250 years. It takes 25 years before a cork oak tree can be harvested for the first time. After the first harvesting, cork oaks are stripped in nine year cycles, always between May and August, when the tree is at its most active phase of growth and is easier to strip. In a context of increasing concern for the environment, it is important to note that cork is the only tree whose bark can regenerate after each harvest – leaving the tree unharmed.



## corticeira amorim

**Corticeira Amorim's Insulation Cork Business Unit is dedicated to the production of 100% natural insulation agglomerates with excellent technical performance, specially designed to match the demands of sustainable construction.**

Amorim is the world's largest producer and supplier of cork, and exports 96% of its production to more than 100 countries. Founded in 1870, the company soon became aware of the endless potential of this 100% natural raw material, and has progressively developed a portfolio of high value-added products and solutions, mainly targeted to the wine and the construction industries.

Amorim leads an exemplary economic activity in terms of sustainable development. By promoting the cyclical harvest of the cork, the company makes the cork oak forest viable, a natural and renewable resource, with endless environmental, economic and social benefits. Cork oak forests are natural CO<sub>2</sub> retainers, they regulate the hydrological cycle and foster biodiversity on a par with regions such as Amazonia, Borneo and the African savanna. Cork harvesting ensures the vitality of cork oak forests, enabling thousands of people to continue to live and work in areas prone to desertification.

## main features

100% natural product

100% recyclable

Carbon negative

Very low embodied energy

Thermal, acoustic, and anti-vibration insulation simultaneously

Promotes thermal lag

Indoor quality A+

High dimensional stability

Supports temperatures between -180 C and +120 C

Good compression resistance

Permeability to water vapor

Practically unlimited durability (keeping the technical features)

Does not release toxic gases in case of fire

Does not react to chemical agents



Cork Benches, by Naoto Fukasawa

**93%** of energy consumption is obtained from biomass, which makes expanded insulation corkboard a very low-embodied energy material.



Mooi Cork Stools, by Jasper Morrison

## insulation cork main products



Expanded insulation corkboard is produced without the use of any additives

### Expanded insulation corkboard

High performance solution for thermal, acoustic and anti-vibration insulation, especially suitable for use in indoor, outdoor and cavity walls; slabs; flat and pitched roofs and radiant floors.



### MDFACADE

Special range of expanded insulation corkboard with high technical performance for exterior wall cladding, interior walls and ceilings – cork at sight.

## some applications



External walls: ETICS/ EIFS



External walls: Interior Insulation



Roofs: Pitched roof with corrugated roofing system



Interior and exterior MDFACADE WAVE

## 100% natural process



Expanded insulation corkboard is derived from *falca* cork, a unique type of cork that is periodically harvested from the upper branches of the cork oak tree. Once removed, the *falca* cork is stored at the factory yard.



It is industrially produced without use of any additives. The process begins by grinding the cork into smaller cork granules.



Once placed into an autoclave and exposed to super-heated steam at 350 °C, the cork granules expand and release their own suberin, a natural binder within the cork. No binders or chemicals are added, since the cork is agglomerated into blocks using its own resin.



The blocks are then removed and subjected to a stabilization period.



The blocks are sawn-cut into expanded insulation corkboard, packed and shipped.



Any waste produced during the industrial process is 100% reusable. In fact, over 90% of energy consumption is obtained from biomass – as a by-product of the industrial process itself – which makes expanded insulation corkboard a very low-embodied energy material.