



LET'S CORK TOGETHER

Home, office
& leisure goods



Bringing cork and sustainability to your ideas

AMORIM CORK COMPOSITES

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The background of the slide is a close-up, high-angle shot of a large pile of cork granules. The granules are light brown and have a rough, irregular texture. A solid blue horizontal bar is positioned at the very top of the image, above the title.

AMORIM CORK COMPOSITES

Amorim Cork Composites researches, develops and manufactures sustainable and high-performance cork composite solutions for applications in multiple industries such as aerospace, mobility, sealing, energy, construction, sports surfaces, flooring, consumer goods, furnishing, and footwear.

Our mission: to add value to cork, in a competitive, differentiating and innovative manner, in perfect harmony with Nature.

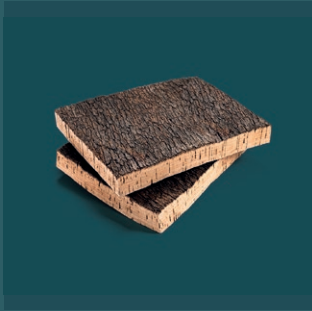
We are global leaders in cork

Amorim Cork Composites is part of Corticeira Amorim, which holds a consolidated worldwide leadership position in five main areas: raw materials, cork stoppers, composites, flooring and wall coverings, and insulation.

Corticeira Amorim has made an unparalleled investment in research, innovation, and design, developing a portfolio of products and solutions with high added value that anticipate market trends and exceed the expectations of some of the most demanding industries worldwide.

2021 Turnover

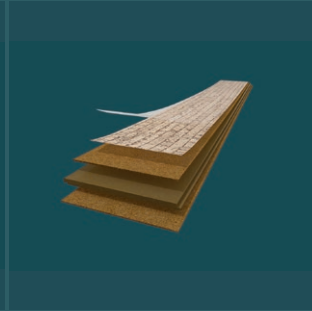
AMORIM



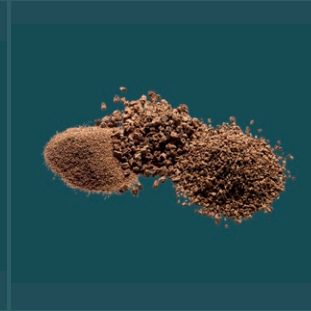
Raw materials
191.5 M€



Cork stoppers
593.3 M€



Floor and wall coverings
123.2 M€



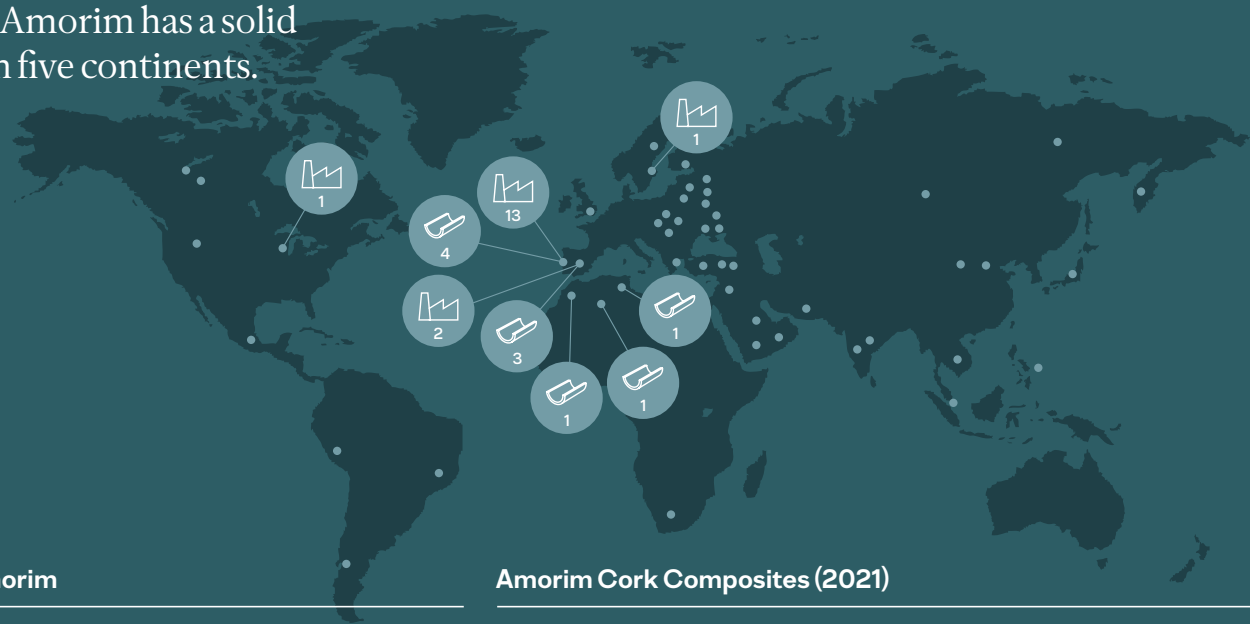
Cork composites
116.7 M€



Insulation cork
14.5 M€

Corticeira Amorim's worldwide presence

Corticeira Amorim has a solid position on five continents.











Corticeira Amorim

 **17** INDUSTRIAL PLANTS

 **10** CORK RAW MATERIAL PREPARATION PLANTS

56 DISTRIBUTION COMPANIES | **12** JOINT VENTURES

Amorim Cork Composites (2021)

 500 APPLICATIONS + PRODUCTS	SALES IN  83 COUNTRIES	 OVER 1,800 CUSTOMERS
 30,000 TONS OF CORK CONSUMED PER YEAR	  40,000 CYLINDERS PRODUCED PER YEAR	  200,000 BLOCKS PRODUCED PER YEAR

Cork: a gift from nature

Cork is the outer bark of the cork oak tree (*Quercus suber* L.). It's a 100 percent natural, technological raw material, with unique properties that give it unrivaled character and make it valuable in several industries and multiple applications.

No trees are damaged or cut during harvesting and that's a great sustainable beginning.

9 Years

The period of time between each cork oak harvesting

25 Years

The average time before the cork oak is harvested for the first time

200 Years

Average lifespan of cork oak tree

Cork's main features



100% natural, reusable and recyclable



Resistance to fire and high temperatures



Hypoallergenic



Resistance to friction



Thermal insulation



Lightness and buoyancy



Impermeability to liquids and gases



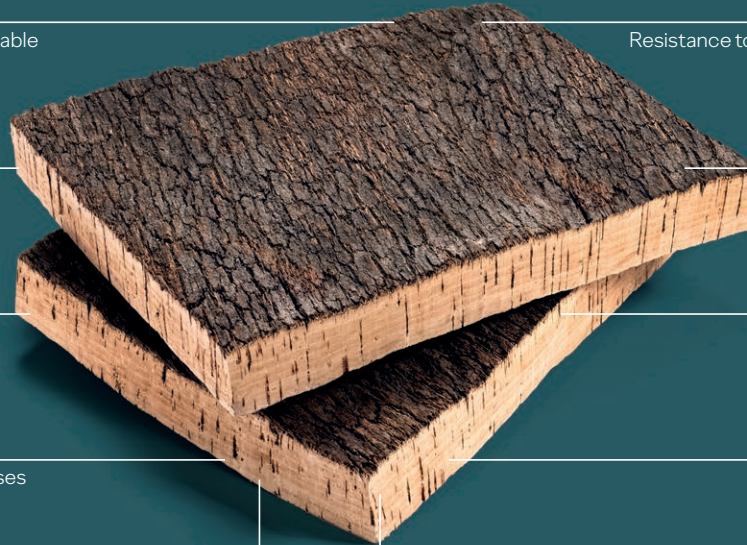
Acoustic insulation



Elasticity and compressibility



Soft touch



The cork oak forest: a hotspot of life

The Montado (cork oak forest) is the basis of a biodiversity-generating ecosystem where the roots of the future are planted.

Cork oak forest is part of one of the 36 most important ecosystems in the world for preserving biodiversity - on par with the Amazon, the African Savanna and Borneo. They support a unique and fragile ecology which constitutes a habitat for rare and endangered species.

Benefits of the cork oak

Prevents soil degradation

Regulates the hydrological cycle

Fights desertification

Absorbs and stores carbon dioxide over very long periods of time

Fights climate change

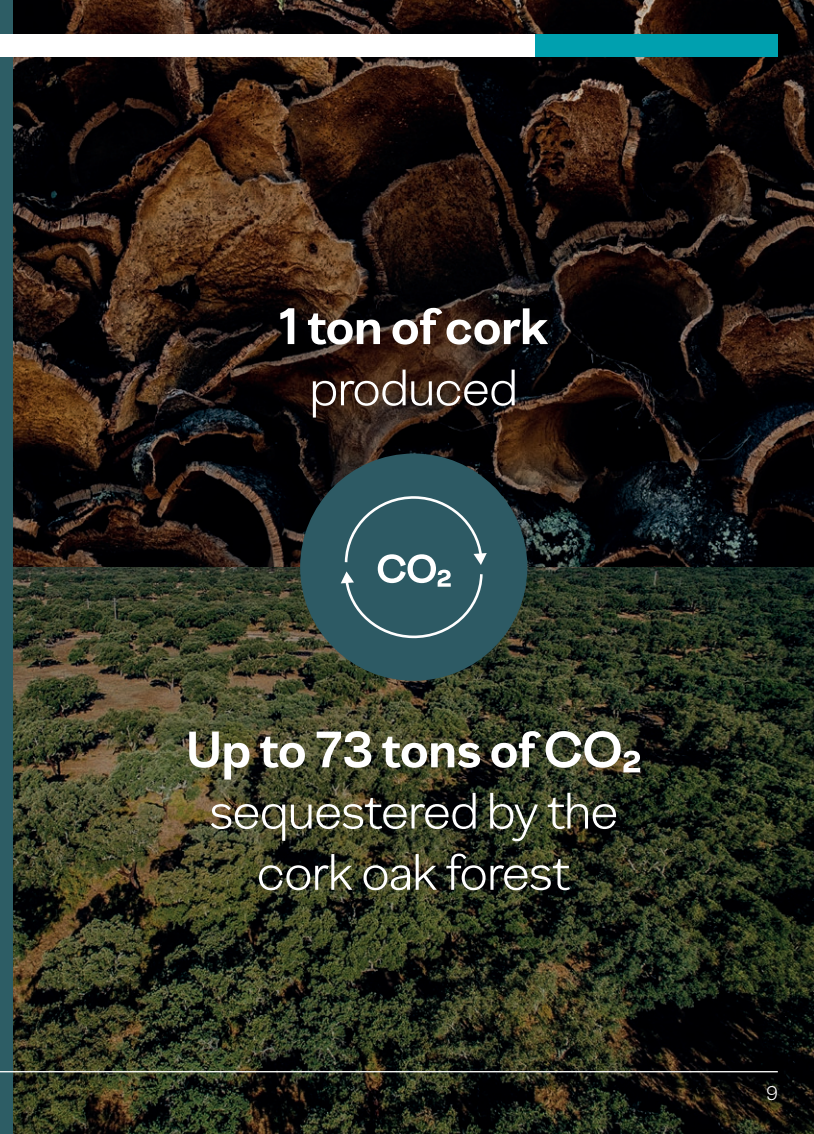
Generates high levels of biodiversity



Cork, a natural CO₂ retainer

Cork oak forests are important natural CO₂ sinks. They make a key contribution to the air we breathe because they capture CO₂ which would otherwise be released into the atmosphere. It is estimated that for every ton of cork produced, cork oak forests can sequester up to 73 tons of CO₂.

* Source: https://www.apcor.pt/wp-content/uploads/2015/10/Brochura_Ambiente__EN.pdf



1 ton of cork
produced

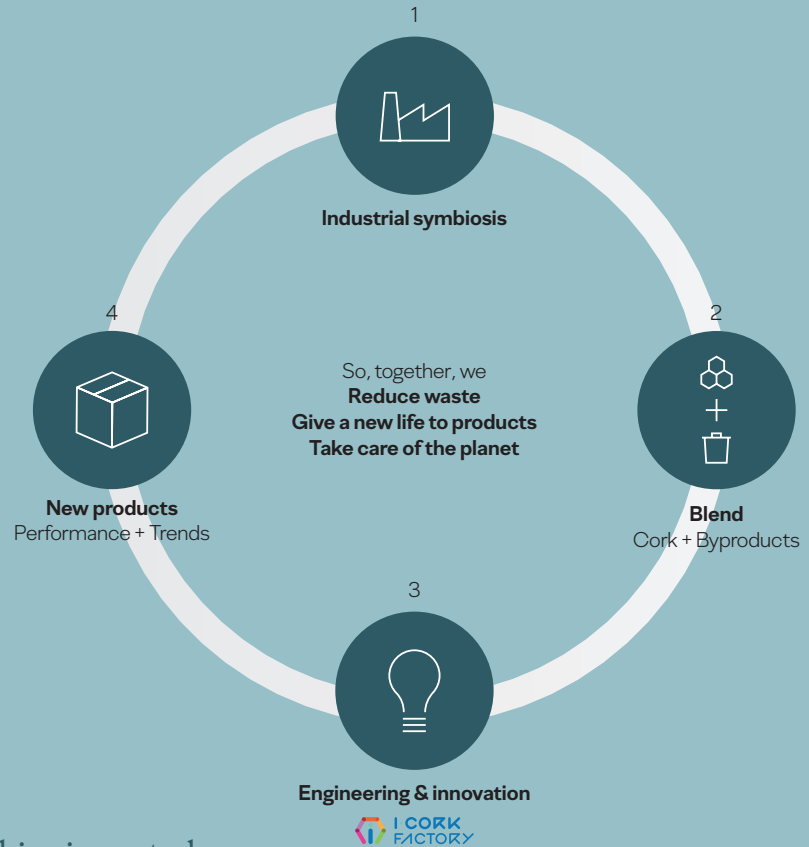
Up to 73 tons of CO₂
sequestered by the
cork oak forest

Circular Economy

New, innovative and performative products from the circular economy are arising.

With cork at the core, blended with other materials, that are waste from other industries (industrial symbiosis), we give materials a new life by creating new products while taking care of the planet.

Over 60% of the company's energy needs are met by using Biomass (cork dust).



Nothing is wasted.
Everything is valued.

Researching, developing and innovating for the future

New products, new markets, new applications, and creating an added value for cork and its characteristics are our development drivers.

i.cork factory was founded to respond to the growing process of creation. It is where our new products are devised in response to current market trends and needs.

Using different materials (thermoplastics, resins, foams, rubbers, natural & synthetic fibers...) and new technologies we challenge ourselves every day to find new and disruptive solutions.

Grinding & mixing

Grinding & mixing technologies to address very different materials sourced from the circular economy.



Lamination

Lamination to address real multilayered materials and panels.



Compounding & extrusion

Materials compounding, dry blends and pelletizing.



Materials by design

Simulation and virtual testing of new materials – simulation lab.



Mixing & rubber processing

Cork rubber materials development.



Molding & shaping

Thermoforming, injection molding, machining and 3D printing.



Boosted by our innovation DNA

We are constantly developing new products with innovative formulae that blend cork with other materials.

That's why we have created Cork Inside, a seal that assures that cork is present in the optimal amount in our products, rigorously tested by Amorim Cork Composites' innovation and engineering teams.

Even if cork isn't completely visible, this 100% natural and recyclable material with unique technical properties is there creating value and differentiation.



The **Cork Inside** seal guarantees that the product contains cork in the optimal amount, giving the required performance.



Cork at the service of design and sustainability

Home, Office & Leisure Goods

At Amorim Cork Composites, we put our experience and knowledge about cork and the various ways of working it at the service of creativity.

We support designers and technical experts from the home, office and leisure goods industry in designing pieces in which cork makes the difference.



ACC Design Studio

The ACC Design Studio is a space for innovation and creativity where cork and design meet.

We have a multidisciplinary and specialized team prepared to support the development of cork-based new products and creative projects that explore the appearance and functionalities of this material.

Our main goal is to enable our customers' design concepts to materialize with cork as the raw material of choice, while meeting the technical requirements of the application.

ACC DESIGN STUDIO

Type of materials

Cork

Cork is the bark of the cork oak (*Quercus Suber L.*), 100% natural, renewable, reusable and recyclable, cork is, whether from an environmental, social or economic point of view, that can be used in various processes and sectors.

Circular Economy

We combine cork with other surplus raw materials from other industries that would otherwise be landfilled, causing high environmental impact. We incorporate the ideal amount of cork, ensuring a response to market demands while continuing to take care of nature.

CPCs (cork-polymer composites)

CPCs are a range of cork composites that combine the adaptability of polymers and the lightness and sustainability of cork. We use bio-based polymers derived from recycled resources, developing sustainable and versatile solutions.



Agglomerated cylinders

Characteristics

- Dimension width: 0.78 x 1.37 m
- Wide range of thicknesses: up to 10 mm
- Wide range of densities: 140–400 kg/m³
- Wide range of cork patterns
- Different grain sizes
- High flexibility



Agglomerated blocks

Characteristics

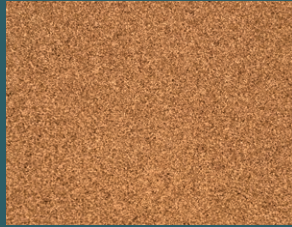
- Dimensions: 920 x 620 mm and 1000 x 500 mm
- Wide range of thicknesses: 0.8–200 mm
- Wide range of densities: 140–600 kg/m³
- Wide range of cork patterns
- Different grain sizes



Most common references - Cork materials



8003



8240



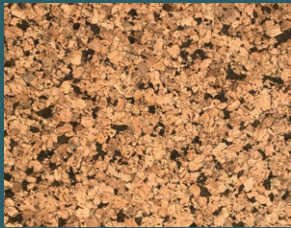
8405



8703



8749



9001



9430



8224



5084



5923

Most common references - CPCs



N600



P100



P200



P302



P304



R101



Our main technologies and process

CNC Machining

CNC machining is a technological process that makes it possible to create complex 3D structures with very precise and high-quality finishes. Applied to cork, it originates decorative and utility pieces that combine aesthetics and the softness of shapes.

Characteristics

- Allows more complex shapes than milling
- Best surface finishing with small size granules
- Suitable for high/mid density materials
- High-tech process
- 5-axis machining



Compression moulding

For more demanding formats, we have developed a special cork formula that can be molded to create complex shapes. Compression molding allows for faster production cycles than CNC machining and is suitable for large-scale production.

Characteristics

- Maximum height: 95 mm
- Minimum wall thickness: 7 mm
- Complex geometries possible with minimal material waste
- Faster production cycle than machining
- Refined grain size is used (0.5-1mm)
- Mostly suitable for high quantities (requires investment in molds)



Lamination

Lamination is a technique widely used in the furniture industry in which cork is used to cover several structures. It is thus possible to associate the appearance of cork with the robustness and resistance of the material that serves as its structure.

Characteristics

- Available in sheets and rolls
- Customizes layer thickness
- High efficiency process
- Easy gluing (wood, textiles and foams)
- Possible to combine cork with rigid and flexible surfaces
- High resistance & low weight
- Possible to associate multi-materials
- Suitable for acoustic/thermal applications remaining natural



Board on Frame

Board on frame structures are coated with cork on the outer sides and have an inner structure in honeycomb cardboard. This technique allows producing pieces of furniture and other very stable, resistant and lighter home and office goods.

Characteristics

- Lightweight
- Rigid surface
- Possible to work with a wide range of geometries
- Core with a honeycomb structure
- Stiff Surface layers
- Compatibility with other materials (ex: metal, wood, etc)



Finishes

Cork is a natural material with unique sensory attributes such as its appearance and soft touch. To protect it from external elements such as humidity, abrasion and stains, we suggest several coating solutions that respect these properties and make goods produced with cork very resistant and durable.

Possible to apply:

- Varnish
- Painting



How do we produce CPCs?

Raw Materials Preparation

Our raw materials and dryer



Compounding



CPCs



Virgin polymer & cork

- Reduce amount of synthetic polymers used by incorporation of cork
- Keep the properties of the prime materials
- Reduce density of final material by cork incorporation
- Process: Blow Molding Extrusion



Amorim Cork Composites

R. Comendador Américo Ferreira Amorim, 260

4535-186, Mozelos VFR, Portugal

T. +351 22 747 5300 **F.** +351 22 747 5301 **E.** info.acc@amorim.com

Amorim Cork Composites USA

26112 110th Street

Trevor, WI 53179, USA

T. +1 262 862 2311 **F.** +1 262 862 2500 **E.** info.acc.usa@amorim.com

www.amorimcorkcomposites.com

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