



**LET'S CORK TOGETHER**

Home, office  
& leisure goods



**Bringing cork and sustainability to your ideas**

AMORIM CORK COMPOSITES



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# 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.

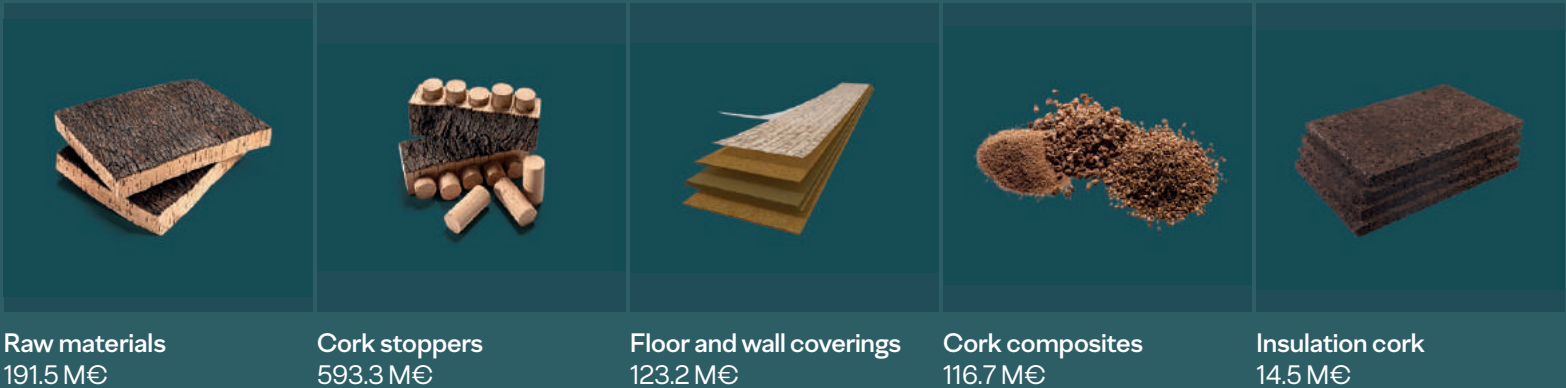
# We are global leaders in cork

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.

## AMORIM

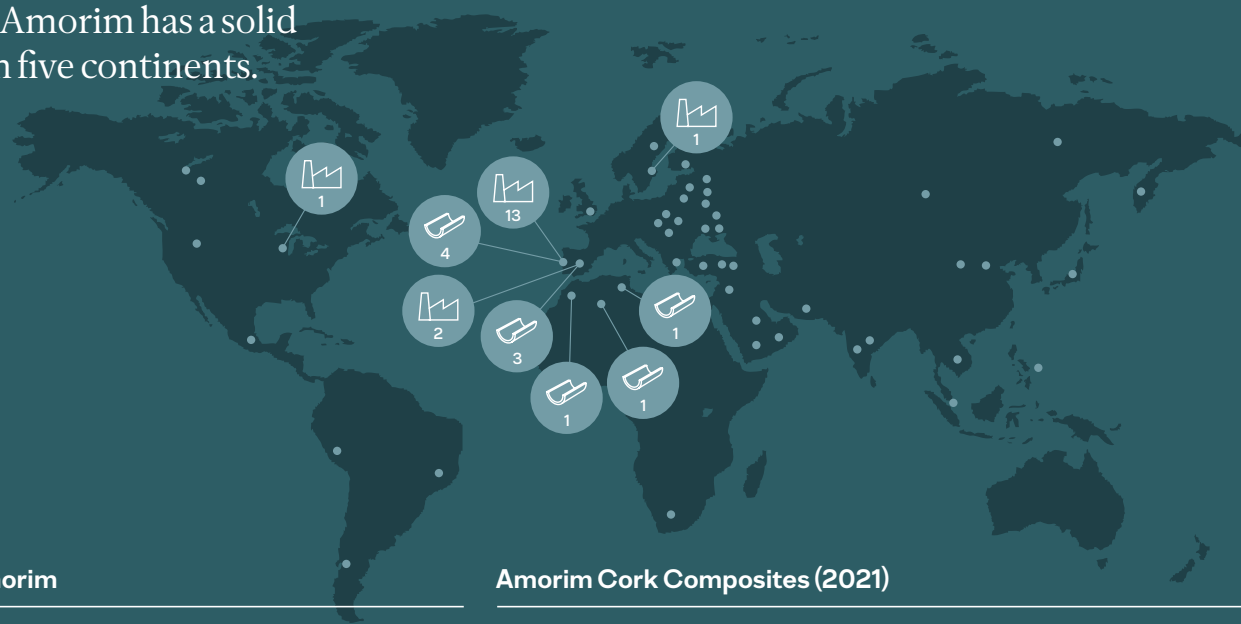
2021 Turnover





# 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

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Prevents soil degradation

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Regulates the hydrological cycle

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Fights desertification

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Absorbs and stores carbon dioxide over very long periods of time

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Fights climate change

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Generates high levels of biodiversity





# Cork, a natural CO<sub>2</sub> retainer

Cork oak forests are important natural CO<sub>2</sub> sinks. They make a key contribution to the air we breathe because they capture CO<sub>2</sub> 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 CO<sub>2</sub>.

An aerial photograph of a cork oak forest. The top half of the image shows a close-up of cork oak bark, which is dark brown and has a porous, layered texture. The bottom half shows a wide view of the forest, with many small, green cork oak trees spaced out across a brownish ground. A circular graphic is overlaid on the forest, consisting of a dark teal circle with a white border. Inside the circle, the text 'CO<sub>2</sub>' is written in white, and two white arrows form a clockwise loop around the text.

**1 ton of cork  
produced**

**Up to 73 tons of CO<sub>2</sub>  
sequestered by the  
cork oak forest**

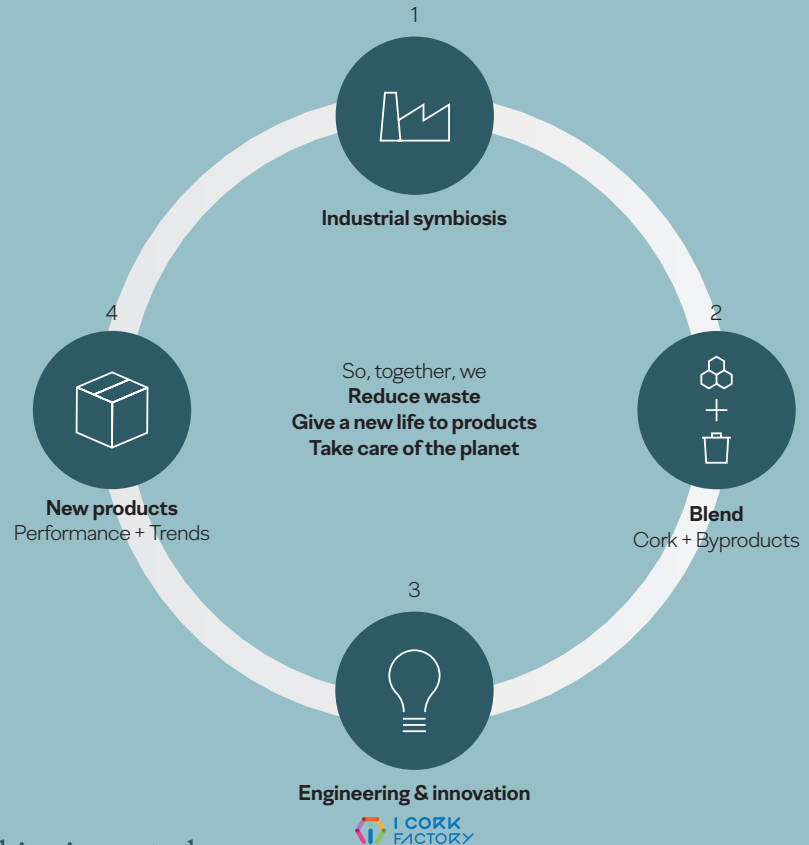
\* Source: [https://www.apcor.pt/wp-content/uploads/2015/10/Brochura\\_Ambiente\\_\\_EN.pdf](https://www.apcor.pt/wp-content/uploads/2015/10/Brochura_Ambiente__EN.pdf)

# 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.





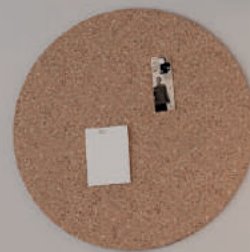
# Cork at the service of design and sustainability



# 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/m<sup>3</sup>
- Wide range of cork patterns
- Different grain sizes
- High flexibility



# Agglomerated blocks

## Characteristics

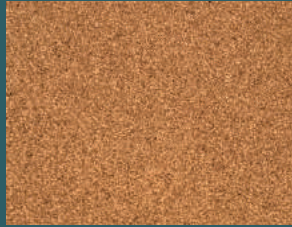
- Dimensions: 920 x 620 mm and 1000 x 500 mm
- Wide range of thicknesses: 0.8–200 mm
- Wide range of densities: 140–600 kg/m<sup>3</sup>
- Wide range of cork patterns
- Different grain sizes



# Most common references - Cork materials



8003



8240



8405



8703



8749



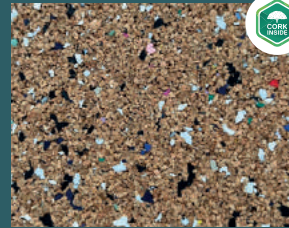
9001



9430



8224



5084



5923



# Most common references - CPCs



N600



P100



P200



P302



P304



R101



The background of the slide is a close-up photograph of cork tiles. The tiles are arranged in a grid pattern and have a natural, textured appearance with various shades of brown and tan. A horizontal bar is overlaid across the middle of the image, consisting of a white segment on the left and a teal segment on the right.

# 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







# Case studies

# Aruzz - Case study

## Challenge

Use only natural and recycled materials.  
Create a frameless memo board, with  
cost effective production.

## Concept

In this project we used a mixture of cork  
and rice husk - which would otherwise  
be wasted - to further reinforce the  
attributes of lightness and innovation.





# Franky - Case study

## Challenge

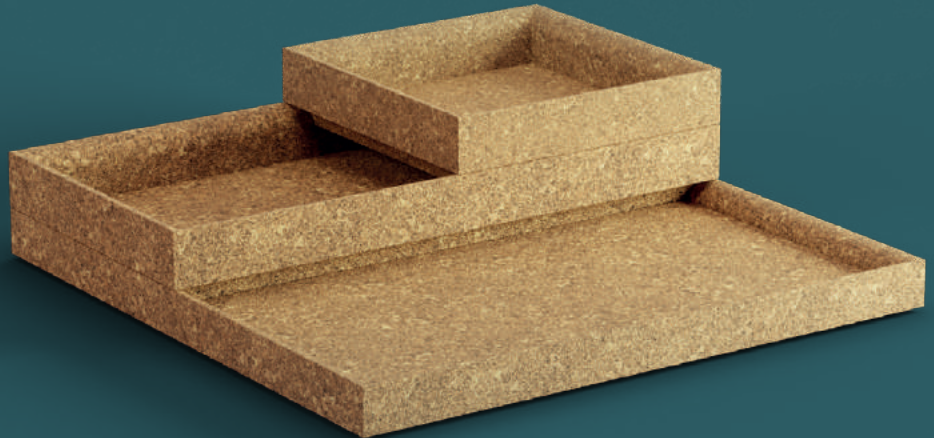
Organizer focusing on teenagers and also in offices. A customer's challenge for its own range.

## Inspiration

Fallingwater, Frank Lloyd Wright

## Concept

Having a product made in natural material that contrasts with technology. Allows you to fit the three pieces in different ways, making it very versatile in its use.





# Starcker · Case study

## Challenge

Cork trivet · black look · relief · 220 mm ·  
two-piece pack · competitive price

## Inspiration

At a table with friends, we always need  
another trivet.

## Concept

Our proposal is two in one. Two trivets  
that fit together, resulting in three  
different combinations.



# Roly poly - Case study

## Challenge

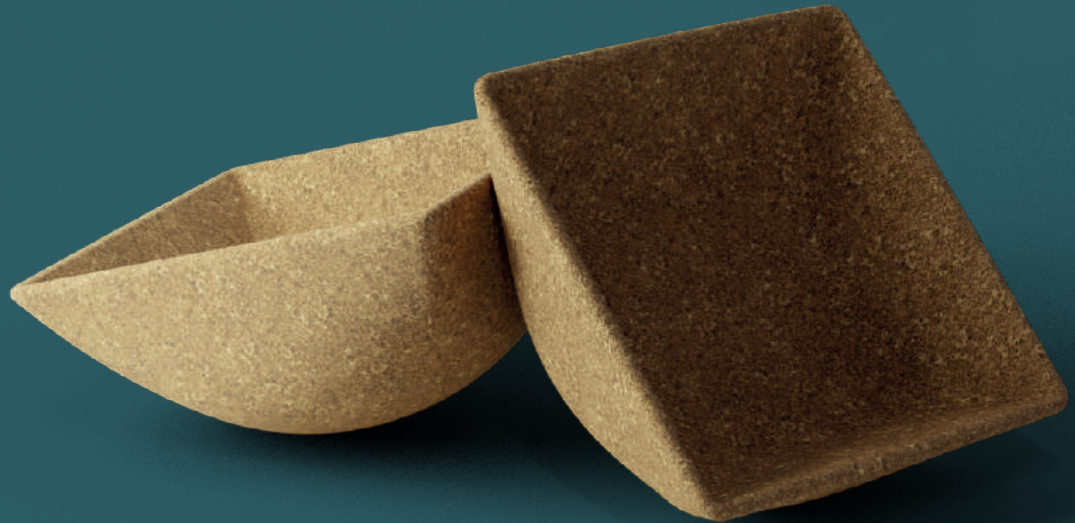
Cork napkin holder · low cost price  
· ecological · recycled and recyclable

## Inspiration

"Square Circle Triangle",  
Bruno Munari

## Concept

Empathy · interaction · fun



# Materia Collection - Case study

MATERIA cork by Amorim curated by Experimentadesign is a collection of everyday objects produced in cork. Each piece combines the unique personality and properties of cork with a contemporary glance from 12 different national and international studios and designers.





# Alma Gémea - Case study

Amorim Cork Composites and Matceramica are leading companies in Portugal and abroad in their respective fields. They have joined forces to create a project that will distinguish, differentiate, and enable them to generate value together.

The development of the Alma Gémea collection takes advantage of the physical and psychological characteristics of both materials. The contribution of all the senses was fundamental to the final result.



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