
AMORIM
CORK
COMPOSITES

Our world is cork.

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, panels and composites, automotive, seals and gaskets, power industry, construction, sports surfaces, flooring, consumer goods, furnishing, and footwear.



Shaping the future through sustainability

Our industry core raw material is 100 percent natural, which allows us to promote a circular, sustainable economy at all stages of the industrial process.



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.

Cork. Versatile. Sustainable.
Technological. Matchless.

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

The average life expectancy of a cork oak.

Cork's main features

Acoustic insulation



Hypoallergenic



Thermal insulation



Lightness and buoyancy



Impermeability to liquids and gases



Elasticity and compressibility



Resistance to fire and high temperatures



Soft touch



Resistance to friction



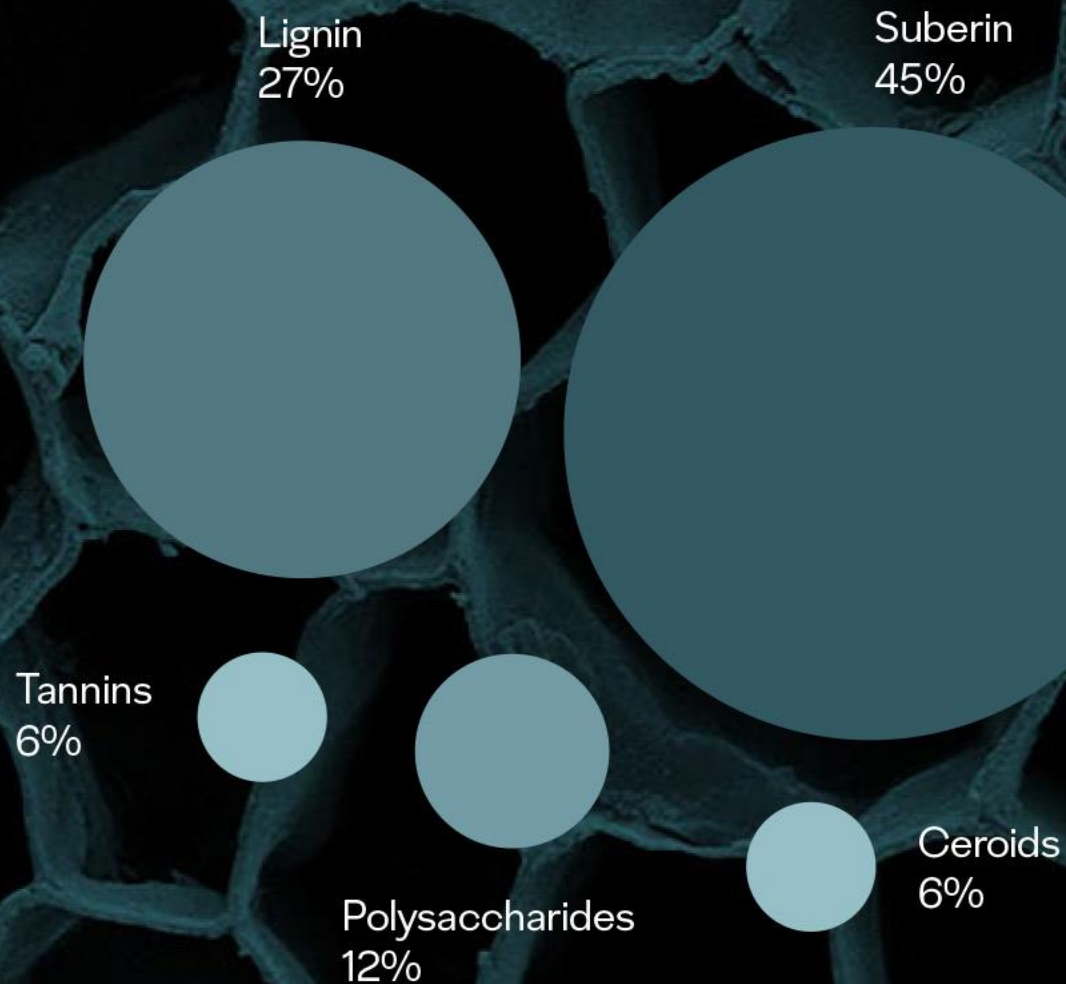
100% natural, reusable and recyclable



Chemical composition of cork

Cork consists of a hive-like structure of microscopic cells filled with a gas similar to air and mostly coated with suberin and lignin.

The high gaseous content of each cell is responsible for **cork's extraordinary lightness**. The association of these cells, as if they were a kind of small aggregate cushions, is responsible for their compressibility and elasticity.



In a single cubic centimeter of cork, there are about 40 million cells.

The cork oak: an extraordinary tree

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

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

Shaping the future through leadership

Corticeira Amorim is a global market leader, contributing like no other player in the market to the sustainability and innovation of the cork industry.



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 CORK COMPOSITES

Turnover by Business Unit (2020)

Raw materials
180.0 M€



Cork stoppers
527.3 M€



Floor and wall coverings
112.1 M€



Cork composites
95.2 M€



Insulation cork
12.3 M€



Corticeira Amorim's worldwide presence

Corticeira Amorim has a solid position on five continents.

Corticeira Amorim

 **19** INDUSTRIAL PLANTS

 **10** CORK RAW MATERIAL PREPARATION PLANTS

51 DISTRIBUTION COMPANIES | **10** JOINT VENTURES

Amorim Cork Composites

500 APPLICATIONS - PRODUCTS | SALES IN **83** COUNTRIES |  OVER **2,000** CUSTOMERS

30,000 TONS OF CORK CONSUMED PER YEAR | **40,000** CYLINDERS PRODUCED PER YEAR | **200,000** BLOCKS PRODUCED PER YEAR

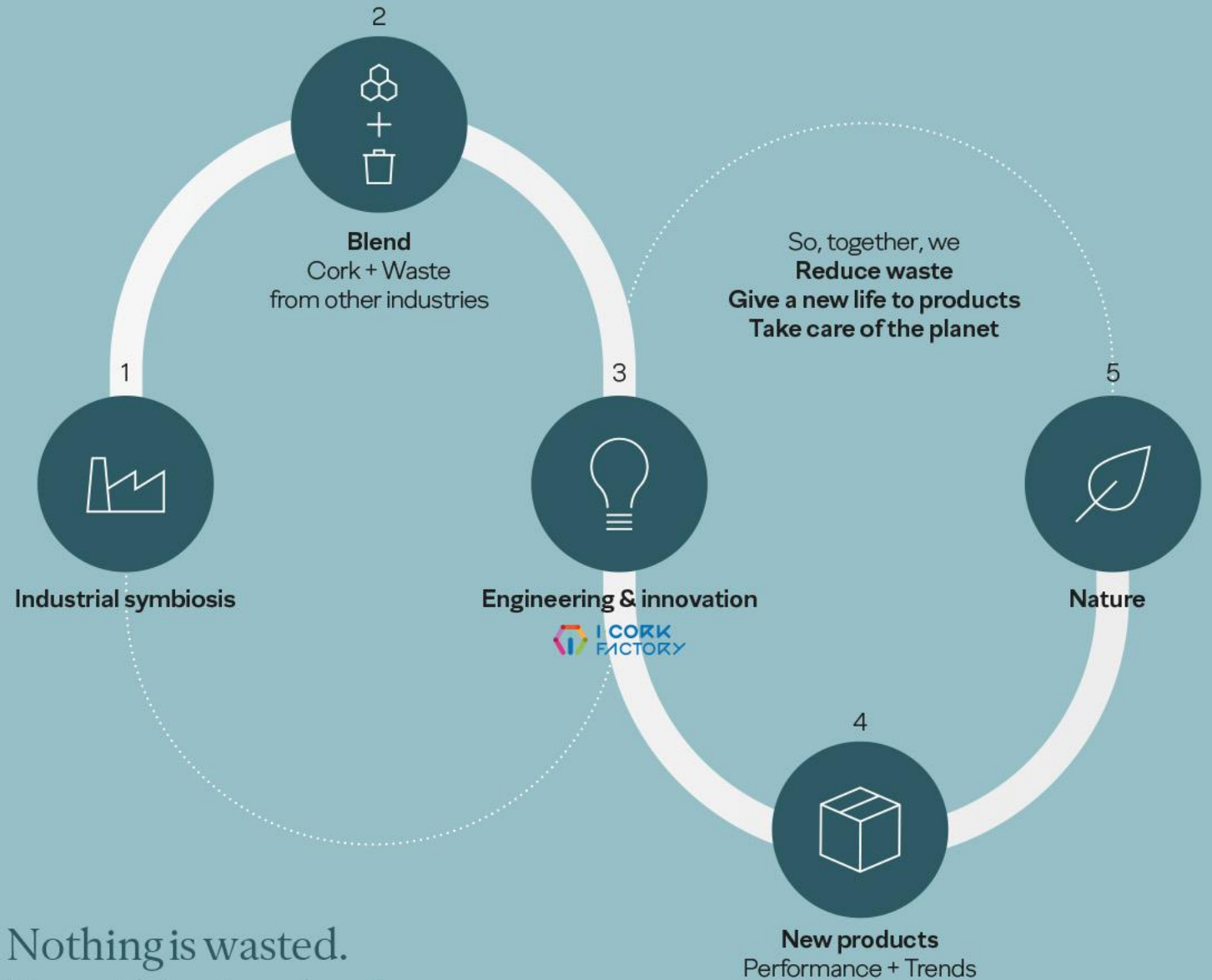


Circular Economy

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.

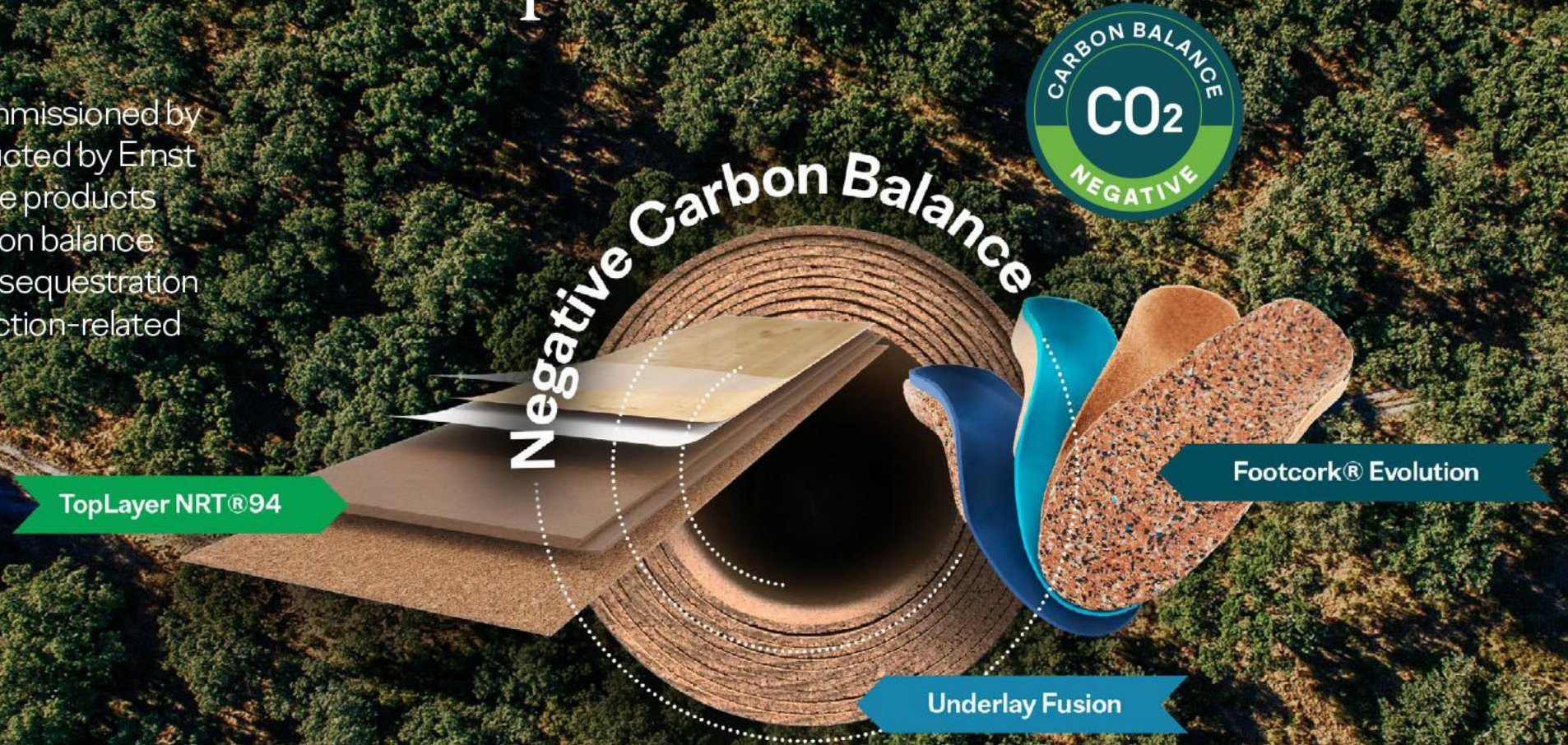
Even if cork isn't completely visible, this 100% natural and recyclable material with unique technical properties is there creating value and differentiation.



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

Amorim Cork Composites' negative carbon balance products

The independent studies commissioned by Corticeira Amorim and conducted by Ernst & Young concluded that all the products analysed have a negative carbon balance when considering the carbon sequestration of cork oak forests and production-related emissions.



Certification

We have adopted sustainable development practices. We are certified both by the Forest Stewardship Council® (FSC) chain of custody certification and certification issued by the Programme for the Endorsement of Forest Certification Schemes (PEFC).

We also hold a range of system management certificates, including NP EN ISO 9001 (Quality Management), OHSAS 18001 (Hygiene, Work and Safety Management System), NP EN ISO 14001 (Environmental System Management) and NP EN ISO 50001 (Energy Management).

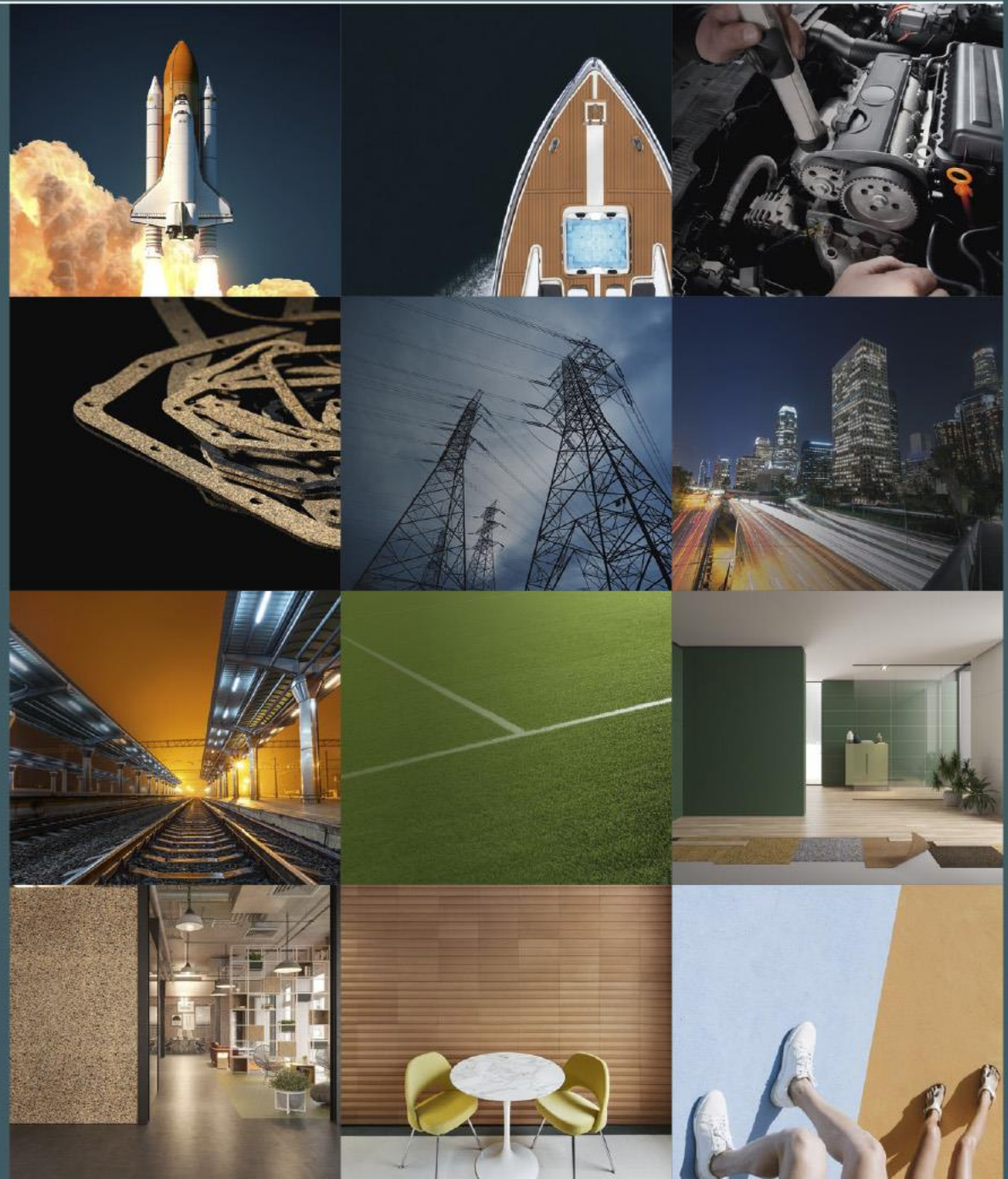


The mark of responsible forestry



Shaping the future through performance

We are constantly challenging the infinite potential of cork with applications and high-performance uses by anticipating market trends and exceeding the expectations of some of the world's most demanding industries.



Business areas

Aerospace



Sport Surfaces



Panel and Composites



Flooring



Automotive



Consumer Goods



Seals and Gaskets



Furnishing



Power Industry



Footwear



Construction



AMORIM
CORK
COMPOSITES



Reinventing thermal protection in the aerospace industry

Due to its excellent ablative properties, lightness, and low thermal conductivity, cork is integrated in launchers and rockets since the beginning of space exploration.

Excellent thermal insulation



High resistance to friction



Flexibility



High performance



Good resilience, excellent compressibility and recovery



Ablative



Lightness



Excellent acoustic insulation



Solid rocket
booster



Launchers



Rocket engines





Reinventing materials for multilayer panels and composites

Thermal and acoustic insulation, low environmental impact, lightness, and durability are some of the advantages that cork brings to industries that use panels and composites in their production processes.

Excellent acoustic insulation



Lightness



Thermal insulation



Damping



More comfort



Fire resistance (IMO certification)



Shock absorption



Sustainable and energy efficient



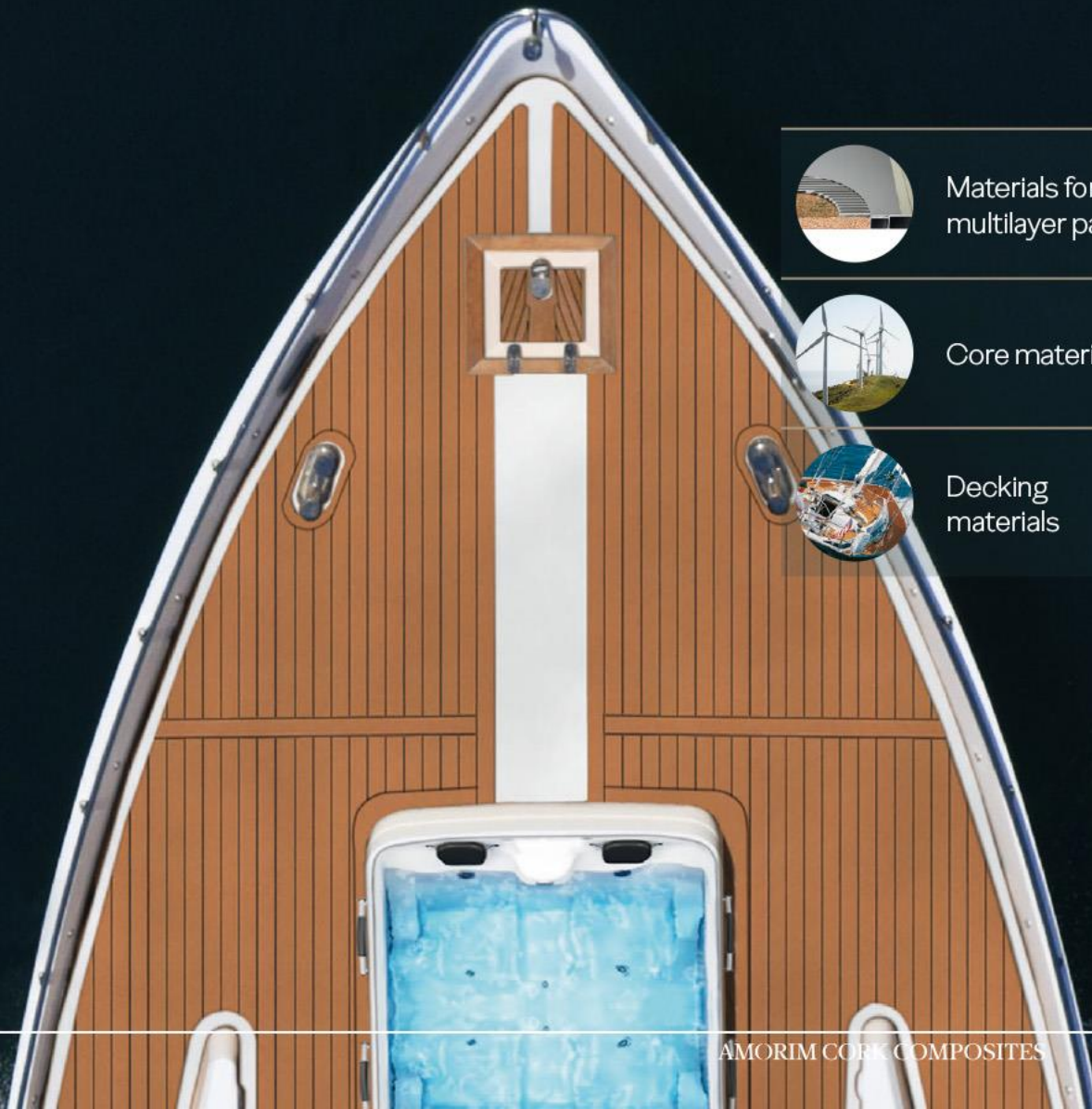
Materials for multilayer panels



Core materials



Decking materials





Reinventing sustainable sealing

Unique blends of cork and rubber allowed us to develop high-performance sealing and gasket solutions for the automotive industry: oil pans, valve covers, radiators, and automatic transmissions. When compressed, cork rubber solutions have a low side flow effect (low Poisson's ratio).



Soft gasket sealing

Chemical resistance



High resilience



Impermeability to liquids



High performance





Reinventing solutions for gaskets and sealing

The same unique properties of cork that are used for the high-performance automotive industry can also be used in other industries and in numerous other applications that are subject to extreme tests of resistance, heat, and pressure.

Chemical resistance



Impermeability to liquids



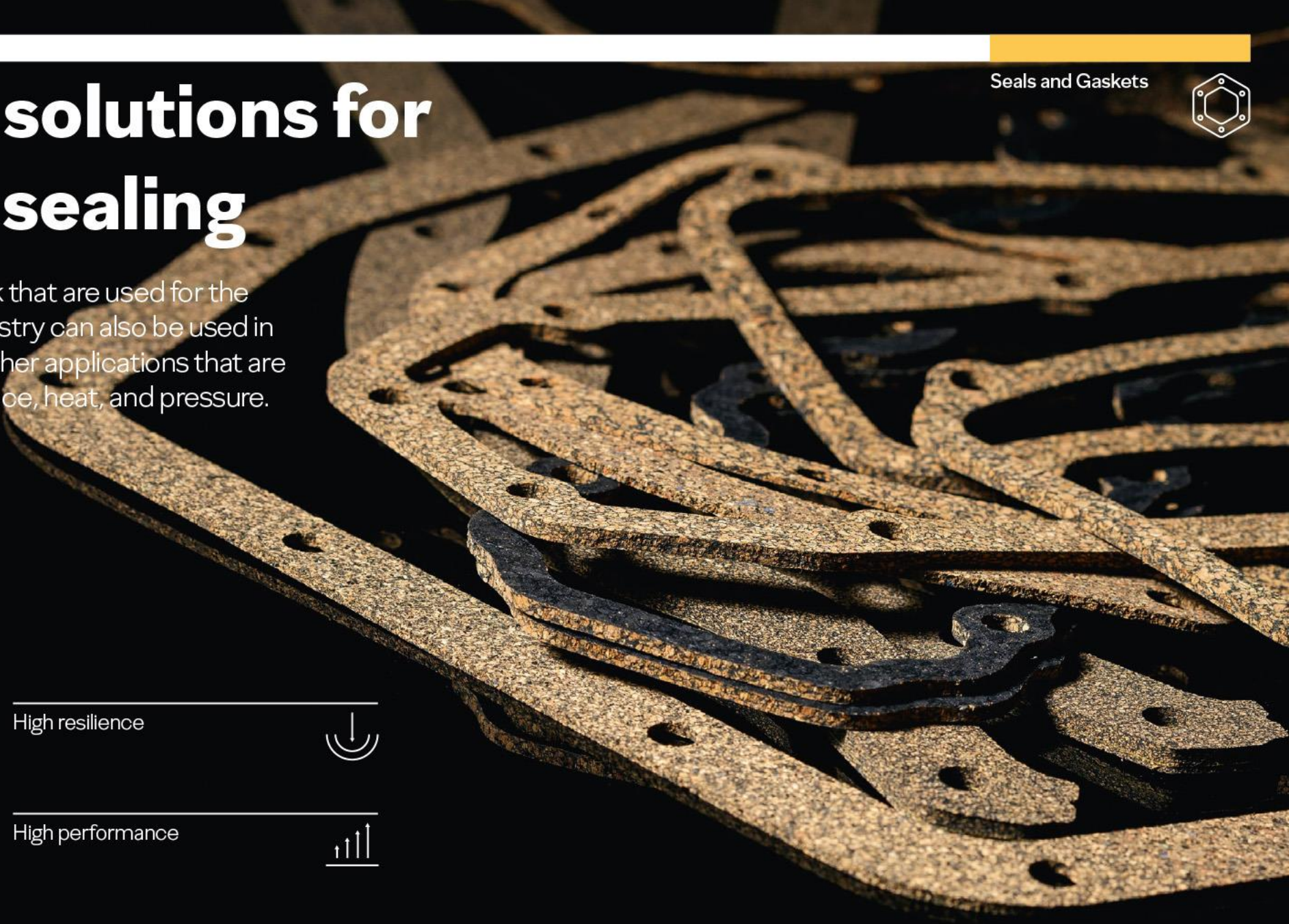
Impermeability to gases



High resilience



High performance





Reinventing energy transmission and distribution

The use of cork composite agglomerates makes it possible to extend the life of the components used in power plants and distribution networks.

We provide engineering solutions in sealing, noise control, and vibration.

Vibration control



Thermal resistance



Excellent sealant



Chemical resistance



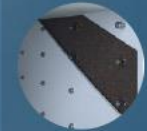
High performance



Shock absorption



Vibration Control



Noise Control



Condensers and insulators



Seals and gaskets



Reinventing building and infrastructure construction

The blend of cork granulates and various polymers results in a diversified portfolio of materials for acoustic insulation and vibration control. We also provide solutions for absorbing the expansions and contractions of different building materials.

Excellent acoustic insulation



Lightness



Excellent thermal insulation



Sustainability



Excellent resilience



Compressibility and "elastic memory"



Vibration Control



Wall bearing



Underlay



Underscreed



Expansion joint



Reinventing the construction of railway infrastructure

Cork is compressible, flexible, and has an "elastic memory" that allows it to adapt to extreme temperature and pressure variations.

It is the perfect raw material for the development of vibration control solutions for railway systems, high-speed urban and metropolitan trains.



Ballast mats



Baseplates



Rail pads

Shock absorption



Resistance and flexibility



Vibration control



Electrical insulation



High resistance to friction





Reinventing artificial turf systems

The combination of cork infills with a shock pad is a positive contribution to the system's drainage, resulting in a high-performance artificial turf system even in adverse climatic conditions.



Cork infill



Shock pad

Better performance



Sustainability



More safety



Reduction of surface temperature



More comfort, avoiding muscle injuries



Reinventing the flooring industry

We provide unique solutions for the production processes of flooring manufacturers.

Our solutions are manufactured with Noise Reduction Technology (NRT) for improved noise reduction and greater thermal comfort.

Flooring components



NRT top layer



NRT inlay



NRT core layer



NRT pre-attached underlayment

More comfort



Excellent acoustic insulation



Excellent thermal insulation



Design versatility



Sustainability





Reinventing flooring accessories

When applied under a floor, an underlayment provides more comfort, protection, and longevity to the final floor, guaranteeing even greater energy efficiency and acoustic insulation.

Durability and flexibility



Excellent thermal insulation



Excellent acoustic insulation



More comfort



Reinventing home and office design

Very easy to install, our DIY product range includes design solutions and materials for application in walls, ceilings, and floors.

Cork's unique sensorial features allow us to create and shape objects for the home and office, without neglecting their functionality.

Soft touch



Aesthetic versatility



Hypoallergenic properties



Resistance and flexibility



Sustainability



Consumer goods





Reinventing the furnishing industry

The constant need to develop new applications with cork has led us to develop new molding and machining techniques. This gives the furnishing industry the possibility to use cork in different types of finishes and shapes, and takes full advantage of its great strength and flexibility.

Soft touch



Design versatility



Excellent resistance and flexibility



Lightness



Reinventing the footwear industry



Once integrated in a shoe, cork guarantees a better distribution of body weight, dampens impact, controls the temperature, and allows the foot to breathe.

Cork is also recognized for enabling easy adaptation to transformation processes (machining, molding, and thermoforming).

Walking comfort



Lightness



Excellent thermal insulation



Hypoallergenic properties



Excellent resilience



Sustainability



Fashion



Health



Comfort

Shapping innovative projects

With cork, we create new formulas and new solutions, we combine different materials that always guarantee the best performance of the final product.



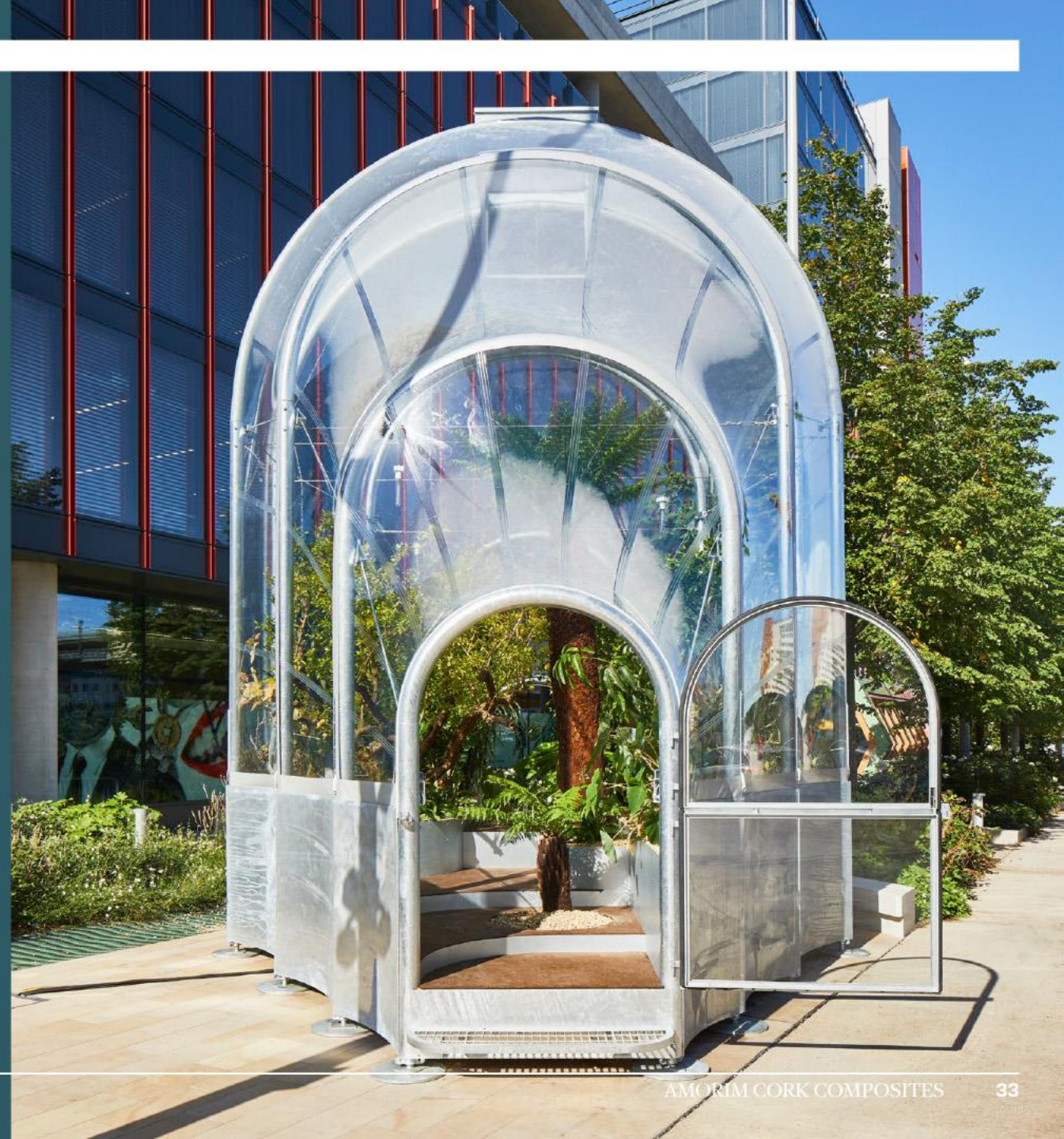


The HotHouse, by Studio Weave

Case study

Inspired by the old-school Victorian glasshouses, "The HotHouse" is one of the landmark projects at 2020 London Design Festival. Developed by Studio Weave and garden designer Tom Massey, this project aims to alert and educate on the effects of climate change.

Cork was used as a pavement solution and chosen for its technical features, adaptability, unmatched sustainability credentials and natural beauty.



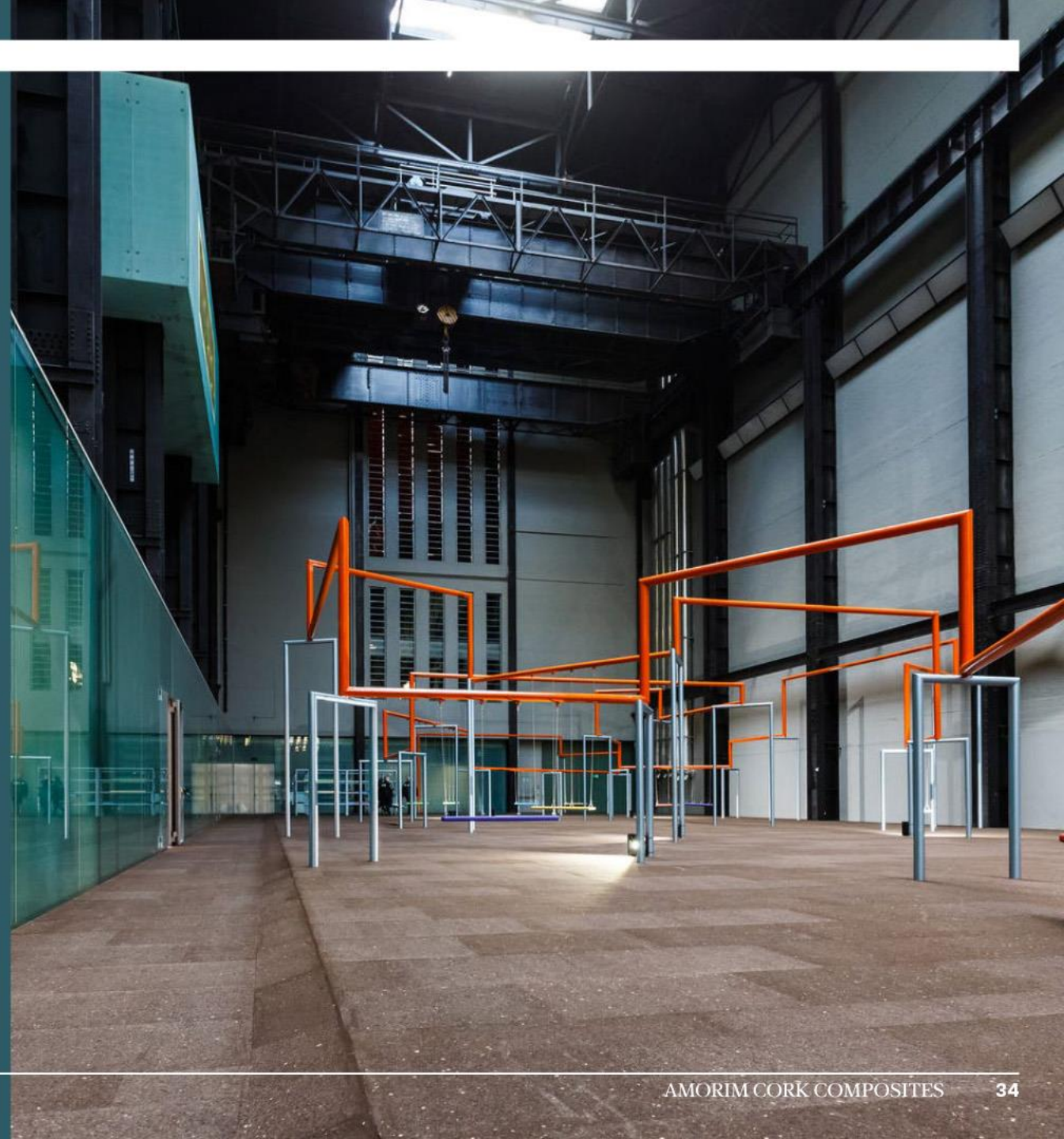


Tate Modern Museum

Case study

Turbine Hall - "Hyundai Commission:
SUPERFLEX: One, Two, Three Swing!"

Installation of 5,000 m² of an innovative cork composite that can meet extremely demanding requirements in terms of large-scale impact absorption and resistance to wear and tear.

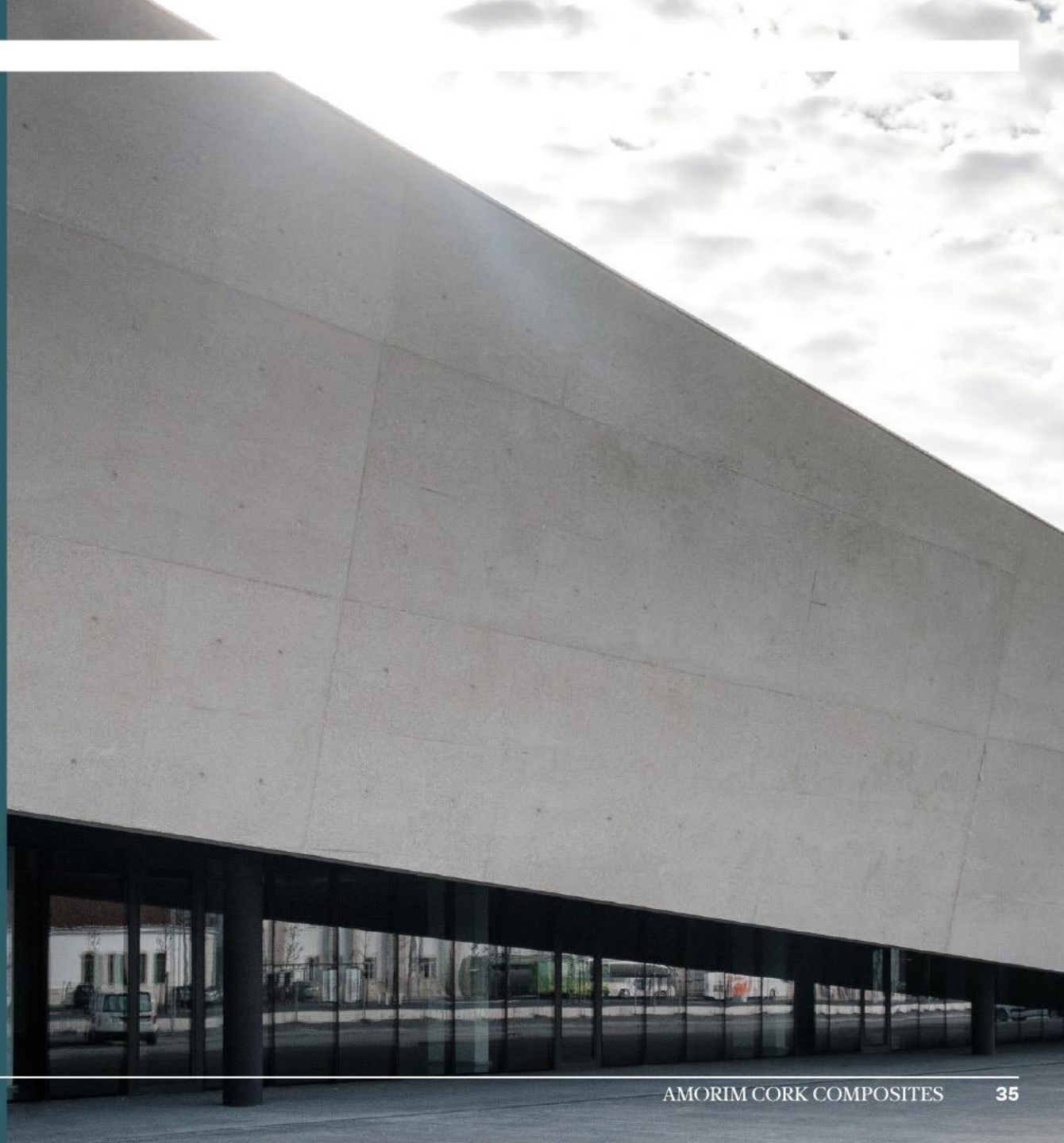




Lisbon Cruise Terminal

Case study

Innovative solution with concrete and cork applied on the building façade to make the building lighter.





ACM30 primary decking in 6 stars river cruising ships

Case study

The use of cork technology, by Wolz Nautic, allowed the reduction of the deck weight per ship by a good 7 tons (on an area of 900m²).

The ships were built by MV WERFTEN.





HydroCork by Wicanders

Case study

The first waterproof cork-based flooring solution with NRT inside (Noise Reduction Technology).



hydrocork





Four Seasons hotel, Bangkok, Thailand

Case study

Acousticork underscreed, made of agglomerated cork and recycled rubber, has been chosen by Landmark Development Group to assure comfort and acoustic insulation in the Four Seasons luxury hotel in Bangkok, Thailand.





Inspiro

Case study

Alucork modular flooring used by the Siemens Inspiro platform for the Warsaw and Riyadh tramways.





Mboard project

Case study

Surfboard specifically developed for the record breaker Garrett McNamara.



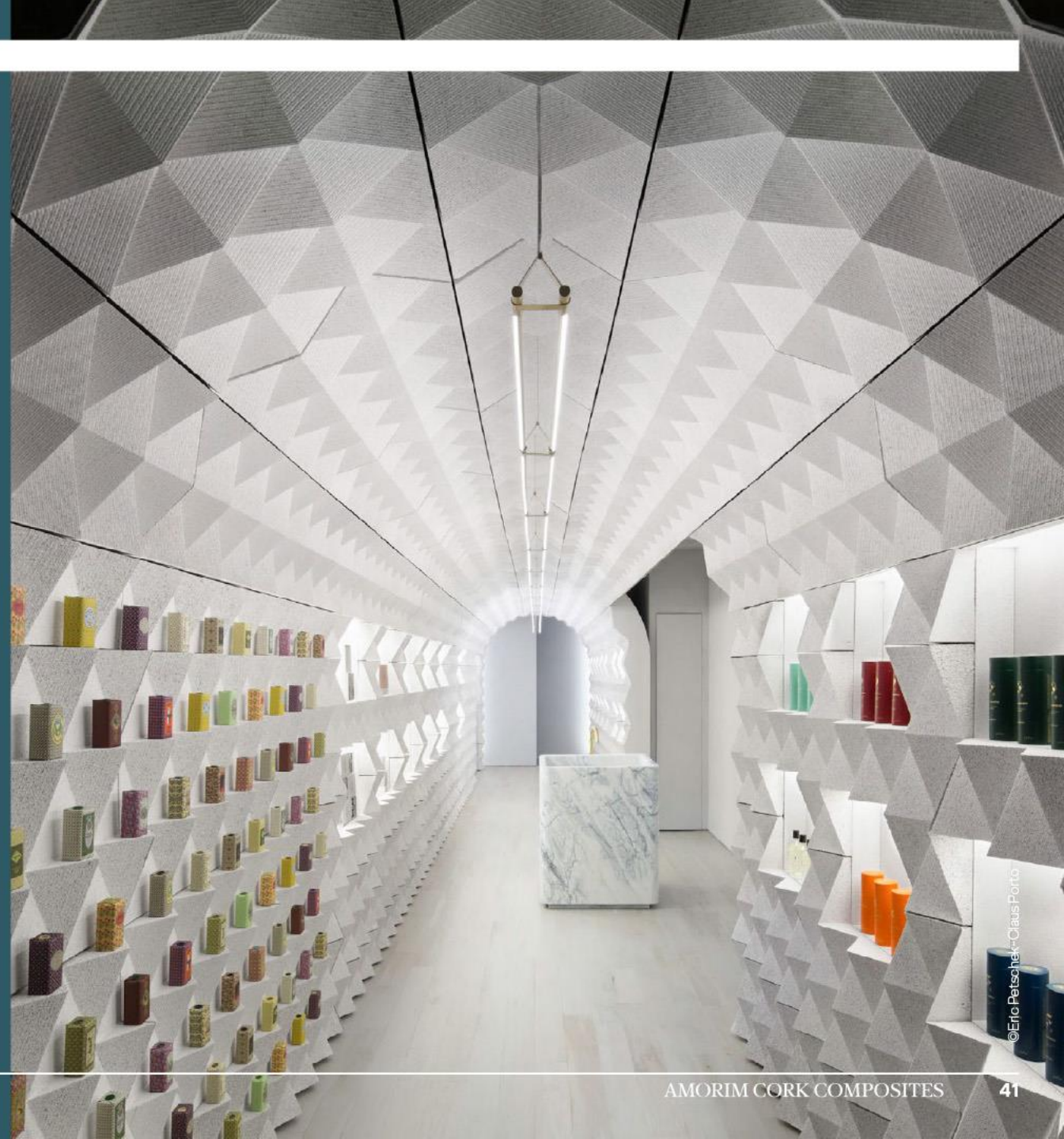


Claus Porto in New York, USA

Case study

The first international Claus Porto store presents its products in carved cork niches in a tunnel with walls made of cork.

The project was conceived by Tacklebox Architecture under the direction of Jeremy Barbour and the design pays homage to portuguese architecture and craftsmanship.





Cork at Vitra Design Museum

Case study

Designed by the Italian design, architecture and research firm, Space Caviar, 3,200 cork pieces were used to showcase design articles, decorative products and items of furniture at the exhibition "Home Stories: 100 Years, 20 Visionary Interiors".





Cork in acoustic wall coverings, by Submaterial Case study

Cork backing is used in wall covering panels to increase soundproofing.

Created by Submaterial, the combination of cork backing with wool felt creates a durable and acoustically absorbent wall covering system.





Vega launcher

Case study

Ablative thermal shielding using a cork composite since the beginning of the European Space Agency's Vega program.





Lavoro "Clima Cork System"

Case study

Cork used in safety footwear of Lavoro to regulate the heat and cold inside the shoe and to give extra comfort.





The Bridge Collection, holding 9.000 years of drinking vessels

Case study

Development of cork furniture for “The Bridge Collection” museum, a space that brings together more than nine thousand years of history and evolution of drinking vessels and that is part of Porto’s touristic place WoW – World of Wine.

Cork was the element chosen because it is a natural material with low maintenance and aesthetically discreet, highlighting the pieces in the exhibition.





SG Malsburg-Marzell Sports Club

Case study

GOTEC Sportsysteme, a German company specialized in the construction and maintenance of sports grounds, chose Amorim Sports' cork-based natural infill for artificial turf for the construction project of the SG Malsburg-Marzell Sports Club football field in Germany.



**AMORIM
SPORTS**

Amorim Sports is a Amorim Cork Composites joint venture



Corkeen

Case study

Corkeen is an innovative solution that combines safety, accessibility, and sustainability, meeting the most demanding requirements of any project.

Installed by certified companies, Corkeen has been designed with children's safety as the top priority, complying with stringent safety standards.

Corkeen is a Amorim Cork Composites joint venture



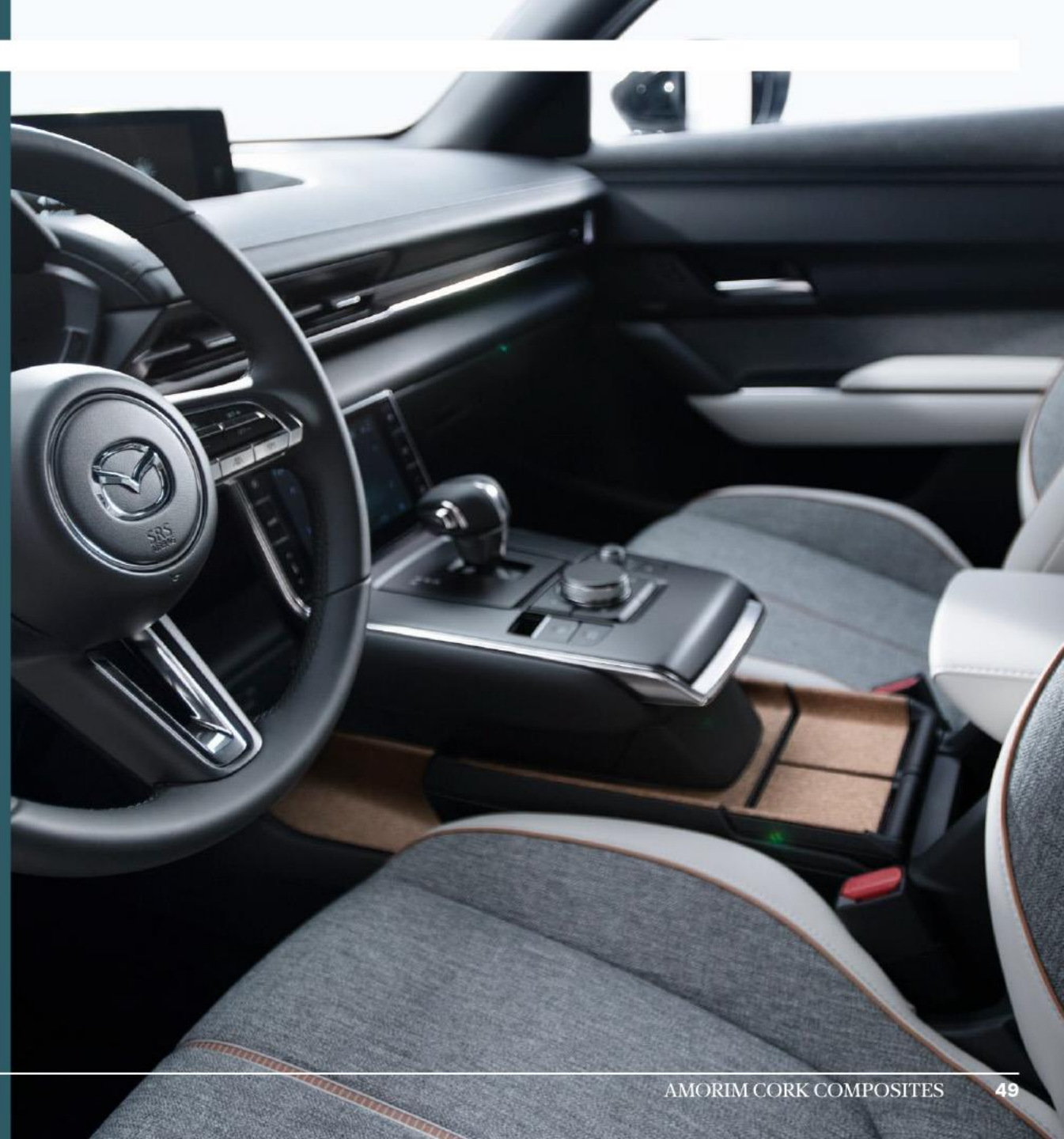


100% Electric Mazda MX-30

Case study

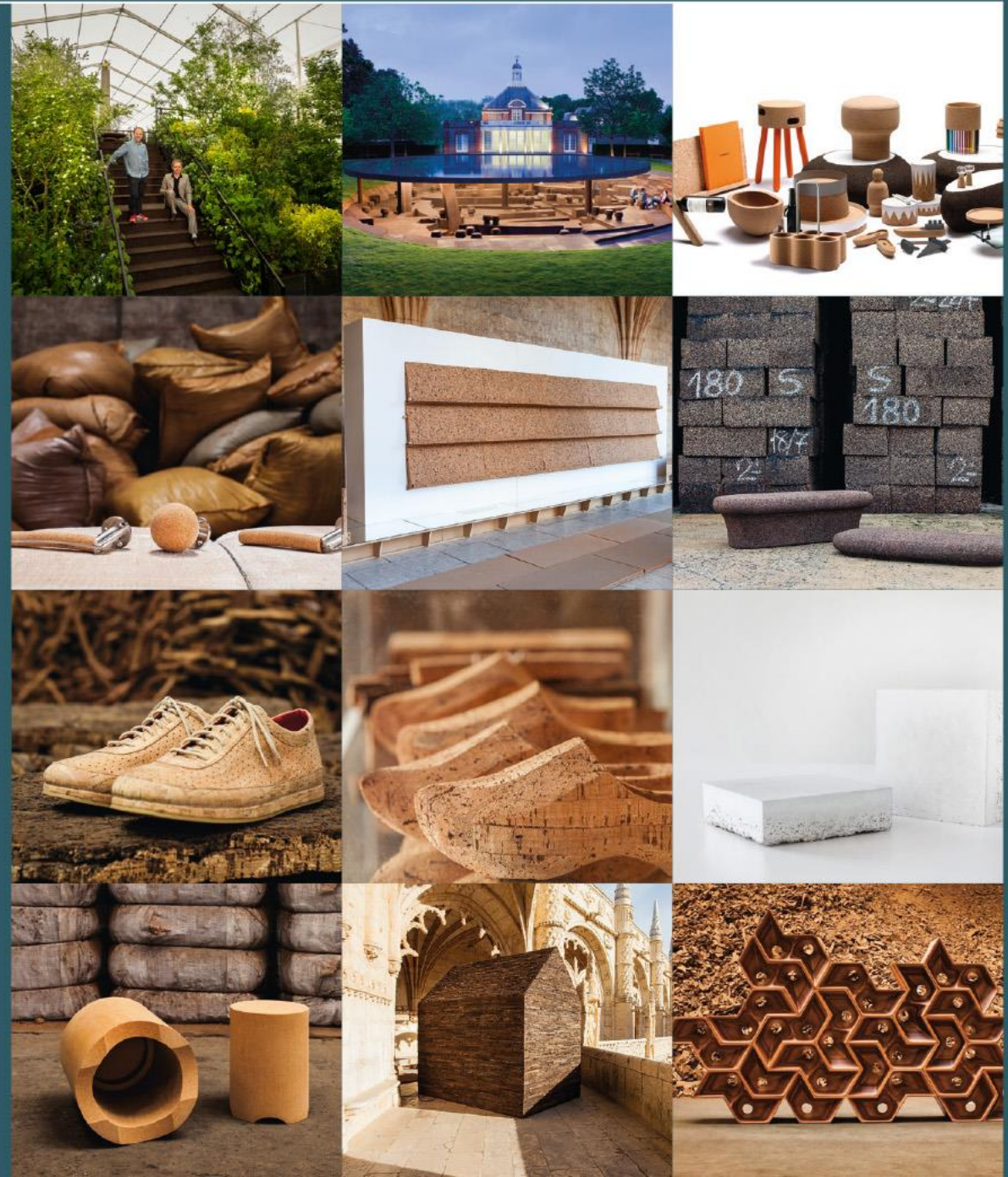
When developing a 100% electric car, Mazda aimed to use environmental friendly materials. Applying cork in automobile's cockpit, allowed the car manufacturer to reduce its impact on environment.

The natural characteristics of cork such as thermal insulation, lightness and softness, enhance a feeling of comfort and natural beauty to the interior of the car, in a solution developed to withstand the demands of everyday life.



Shaping the future through creativity

Inspired by imagination, cork
expresses itself in the design world.



Garden of the future, by Tom Dixon and IKEA

Cork was one of the main raw materials used in this installation at Chelsea Flower Show in London 2019.

The project promotes sustainability by encouraging home cultivation of vegetables and plants in urban environments.



Serpentine Gallery Pavillion

Cork was the chosen material to integrate the Serpentine Gallery Pavillion, in London. A project signed by Herzog & de Meuron e Ai Weiwei.



Materia Collection

MATERIA.
CORK BY AMORIM

Materia is curated by Experimentadesign and includes original objects that explore the unique properties of cork, using the most diverse production technologies.



The “Metamorphosis” of cork

Cork triggered a reflection in the minds of the winners of the Pritzker Prize, Álvaro Siza, Eduardo Souto de Moura, and Herzog & de Meuron, along with architects Alejandro Aravena, Amanda Levete, João Luís Carrilho da Graça, and Manuel Aires Mateus and product designers James Irvine, Jasper Morrison, and Naoto Fukasawa.



Stool
Álvaro Siza

Door handles
Eduardo Souto de Moura



Stow it
James Irvine



Cork shoes
Jasper Morrison



Cork bench
Naoto Fukasawa



Cork clogs
Alejandro Aravena



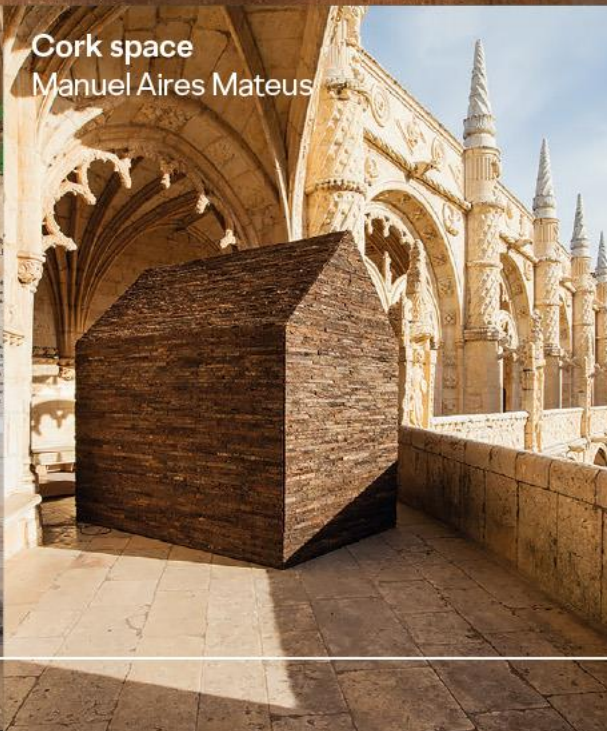
The Metamorphosis of cork into concrete
João Luís Carrilho da Graça



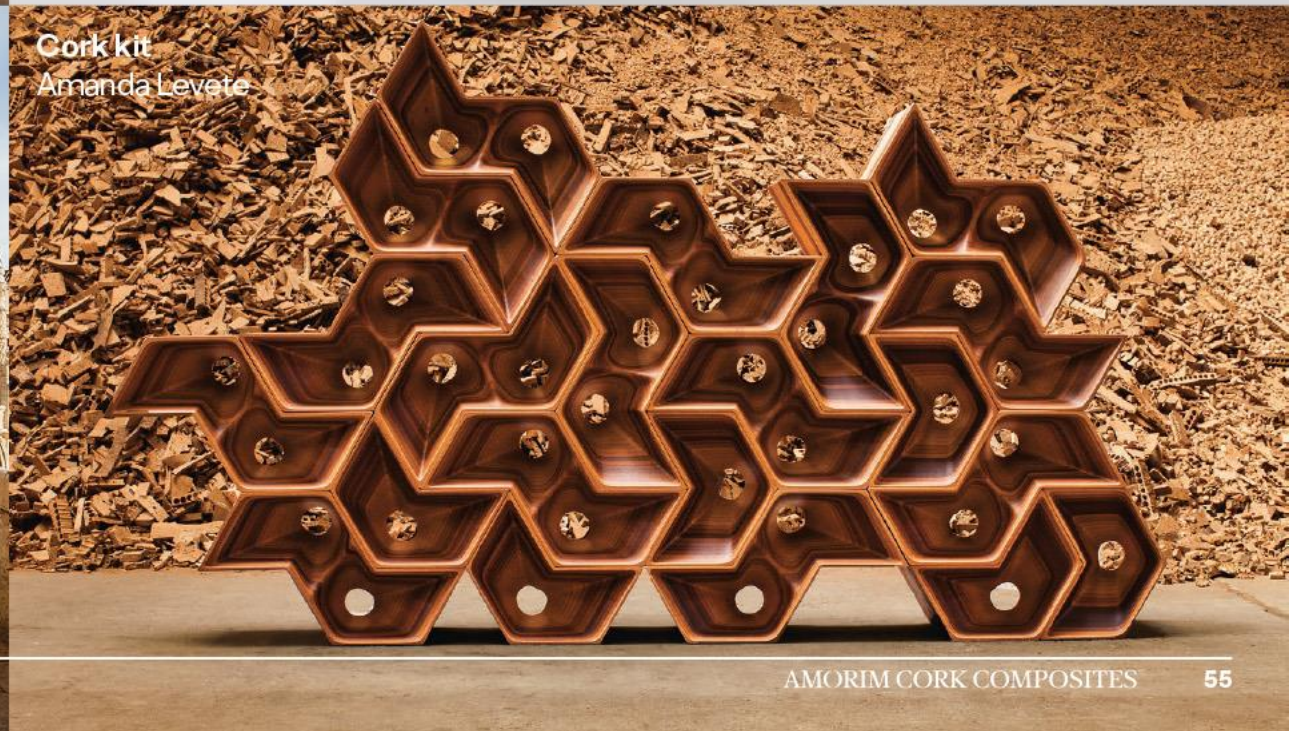
Elbphilharmonie Hamburg,
Philharmonic Hall, scale 1:20
Herzog & de Meuron



Cork space
Manuel Aires Mateus



Cork kit
Amanda Levete



What experts say about cork

“Cork is fully recyclable, which allows you design freedom to explore different geometries”.

Amanda Levette
British architect

“Cork is an amazing and unique material, and its set of unique properties is almost too good to be true”

Lars Beller
Norwegian designer

“Cork is nature’s foam, a foam with unique combination of properties”.

In NASA Technical
Reports Server

“The use of a cork stringer allows for greater functionality and strength of the surfboard while, at the same time, enabling increased flexibility for the surfer and for the shaper who can customize the board.”

Garrett McNamara
Surf world-record

“Indoor acoustic performance is a key factor in increasing quality of life and I believe that cork-based materials offer the best way to help people to increase their quality of life.”

Ir K.K. Iu
Vice President of Macao Institute of Acoustics

“The natural spirit of the cork is a perfect starting point: it allows you to explore new forms for everyday needs.”

James Irvine
British industrial designer

“The top performance and also the important factor of sustainability makes cork probably one of the most amazing materials to work with.”

Matthias Windmüller
President of MMFA - Multilayer Modular Flooring Association



Customers Portfolio



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Thank you!