AMORIM
CORK COMPOSITES

Reinventing converter materials

Gaskets
and much more

2019/2020 EDITION

Gaskets and much more

Cork, an exceptional raw material

Cork comes from the bark of the cork oak tree (Quercus Suber L). It is a plant tissue, 100% natural, which covers the trunk and branches.

It consists of a honeycomb-like structure of microscopic cells filled with an air-like gas and coated mainly with suberin and lignin. One cubic centimetre of cork contains about 40 million cells.

Cork is known as “nature’s foam” due to its alveolar structure. Cork is lightweight, airtight, watertight, resistant to acids, fuels, and oils and impervious to rotting.

Cork is sustainably harvested by specialized professionals without damaging the trunk. The cork oak tree re-grows the outer bark layer and is harvested every 9 years.
Over the course of its lifetime, which lasts about 200 years, the bark will be harvested 17-20 times. Cork is a natural material which is both renewable and recyclable.

Cork cell microscopic view.

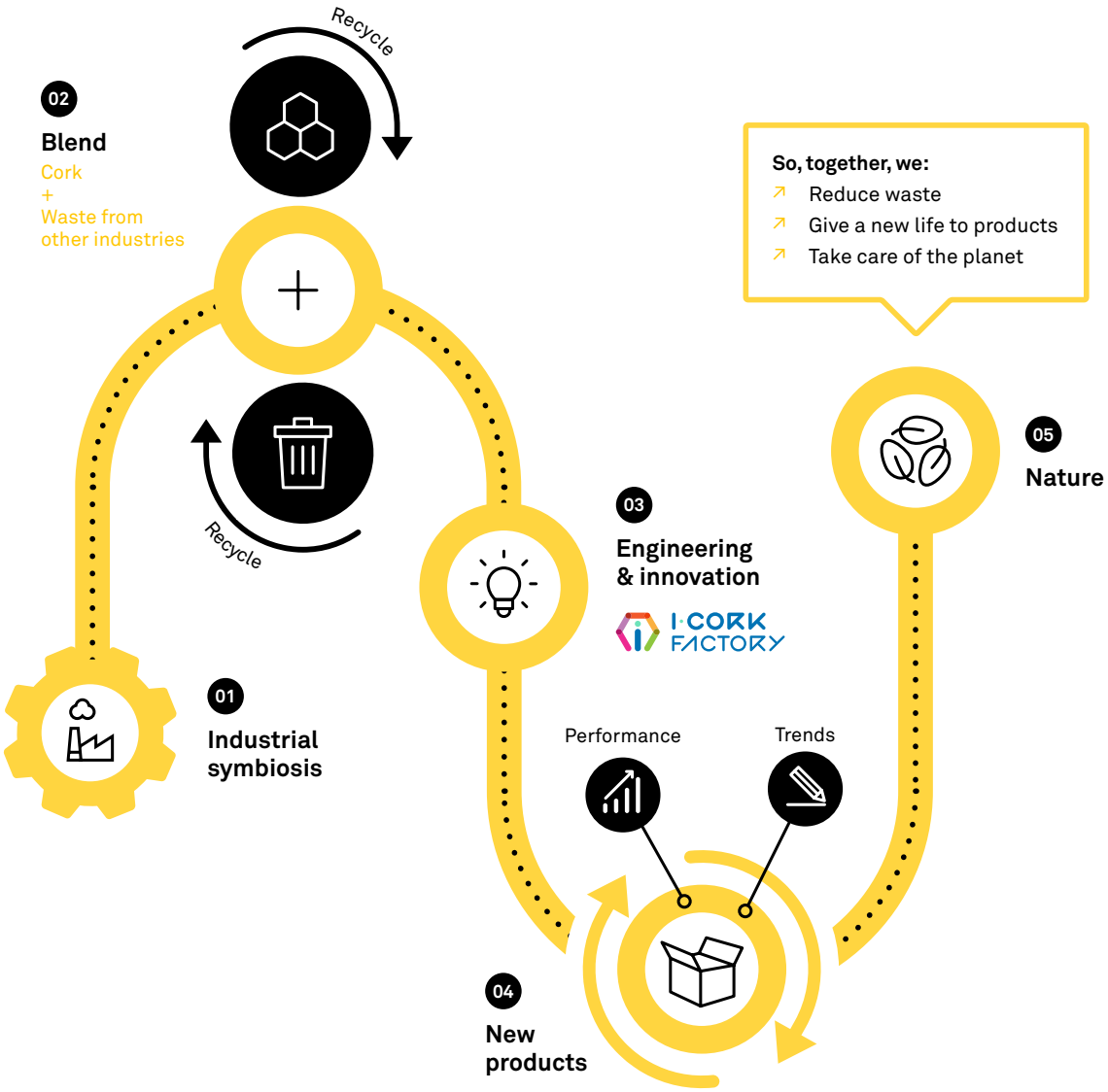
- **Lightweight**
- **Resilience**
- **Thermal insulation**
- **Vibration damping**
- **Acoustic isolation**
- **Flexible, installation and process friendly**
- **Versatility**
- **Sustainable and energy efficient**

The circular economy at the heart of innovation

At i.cork factory, our innovation hub, we achieve the perfect match between performance and sustainability. New, innovative and high performance 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 time, our expertise in cork has enabled us to create these new and high technological formulae that blend cork with other materials - thereby leveraging cork's attributes.



CORK INSIDE®

When cork isn't so visible, the **Cork Inside** seal guarantees that the product contains cork in its formulation, a 100% natural and recyclable material with unique technical properties.

Cork Inside formulations combine cork with other materials and are developed and rigorously tested by Amorim Cork Composites' innovation and engineering teams. **Cork Inside** responds to stringent requirements and guarantees the needed performance required for the application.

E ECO

Amorim's ECO range of materials offers the exclusive advantage of being truly natural, eco-friendly, sustainable and recyclable.
These materials are constituted by cork granules agglomerated with specific binders, that due to cork's physical structure and composition, deliver a unique set of combined features.
Due to their inherent flexibility, they are ideal for applications that require passive thermal management, weight reduction or non-extruding compression and recovery.

Lightweight

Thermal insulation

100% natural

Zero side flow

E101

E102

E103

E104

F FLEX

These materials are constituted by a vulcanized blend of selected rubbers and cork.
The choice of polymer type, cork quality and formulation define a wide range of material performances that can be used in applications such as protective and resilient decoupling elements in rigid structures or web and roller processing industries for flexible materials such as plastic films, metal foils or textiles.
Our FLEX range of products brings adaptability and resilience to a wide range of engineering design functions.

Resilience

Tactile friction

Vibration isolation

High flexibility

X101

X102

X103

X104

TECH

Our TECH range of materials is an eco-friendly solution that combines sustainable materials in a never ending green cycle.
They are a combination of cork granulate and a wide variety of different post industrial materials, delivering the best possible functionality at the best value.

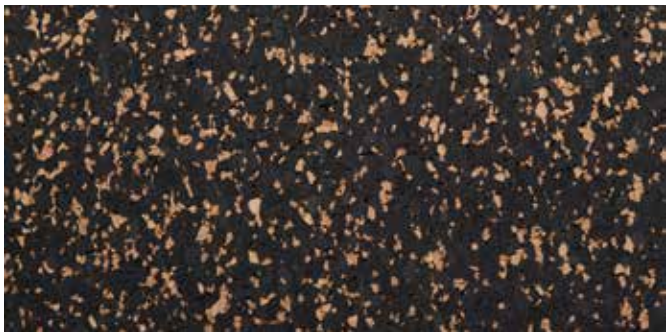
Given their versatility they can be used in many different contexts, ranging from applications that require cushioning and damping against impacts or structural vibrations and also serving as protection padding - impeding the ingress of dust, water or other foreign objects.

Vibration damping

Acoustic isolation

Impact cushioning

Versatility

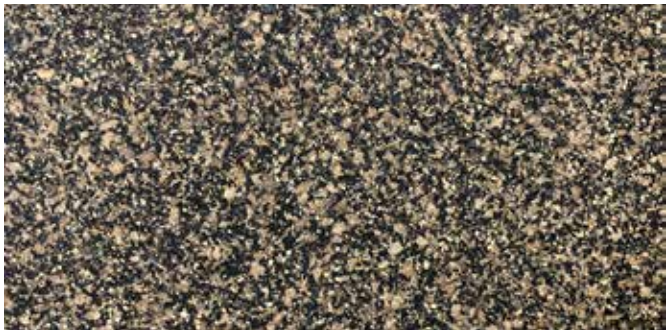


K501

K503

K504

K507



K508

K509




Gaskets and much more

Our commitment to support industry partners and improve their products by continually offering new material solutions, has culminated in a broad range of products with specific features tailored to the requirements of multiple industries and applications.

Adjusted to typical converter processes - such as coating, lamination, printing, die cutting and slitting - this range has been designed to be processed in large diameter products, delivering scale benefits by increasing converter efficiency.

Materials can be supplied with the client's choice of adhesive backing.

The choice of materials combines a wide array of features - ranging from thermal management, to vibration damping, acoustic benefits and much more.

Product range

E
ECO

Material	Hardness (Shore A)	Density (Kg/m³)	Compressibility (%)	
E101	-	150–210	30–50	100psi
E102	-	> 224	25–45	
E103	-	> 300	10–20	
E104	-	250–320	20–40	

F
FLEX

Material	Hardness (Shore A)	Density (Kg/m³)	Compressibility (%)	
X101	46–66	480–720	40–60	400 psi
X102	55–70	560–750	30–50	
X103	65–85	800–1040	15–30	
X104	45–60	800–900	40–60	

T
TECH

Material	Hardness (Shore A)	Density (Kg/m³)	Compressibility (%)	
K501	-	280–400	40–65	100psi
K503	-	540–650	10–20	
K504	-	560–650	15–30	
K507	-	250-320	35–55	
K508	-	690–790	20–45	
K509	55–75	900–1030	20–30	400 psi

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