

ACCOSEAL®



Reinventing sealing solutions

Performance
and reliability



2019/2020 EDITION



Sealing solutions

Cork, an exceptional raw material

Cork is the outer bark of the cork oak tree (*Quercus Suber L.*), the 100% natural plant tissue covering 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 also known as “nature's foam” due to its alveolar cellular structure. It has a closed-cell structure making it lightweight, airtight and watertight, resistant to acids, fuels and oils, and impervious to rot.

It is sustainably harvested by specialised professionals without damaging the trunk, thus enabling the tree to grow another layer of outer bark that, in time, will be re-harvested. Over the course of the cork oak tree's life, that lasts 200 years on average, the cork may be stripped around 17 times. This means that cork is not only a natural raw material, it is also renewable and recyclable.



Thermal resistance



Impermeable to liquids



Controlled side flow
- less extrusion,
good conformability



Chemical resistance



Elasticity
- good load transfer



Performance



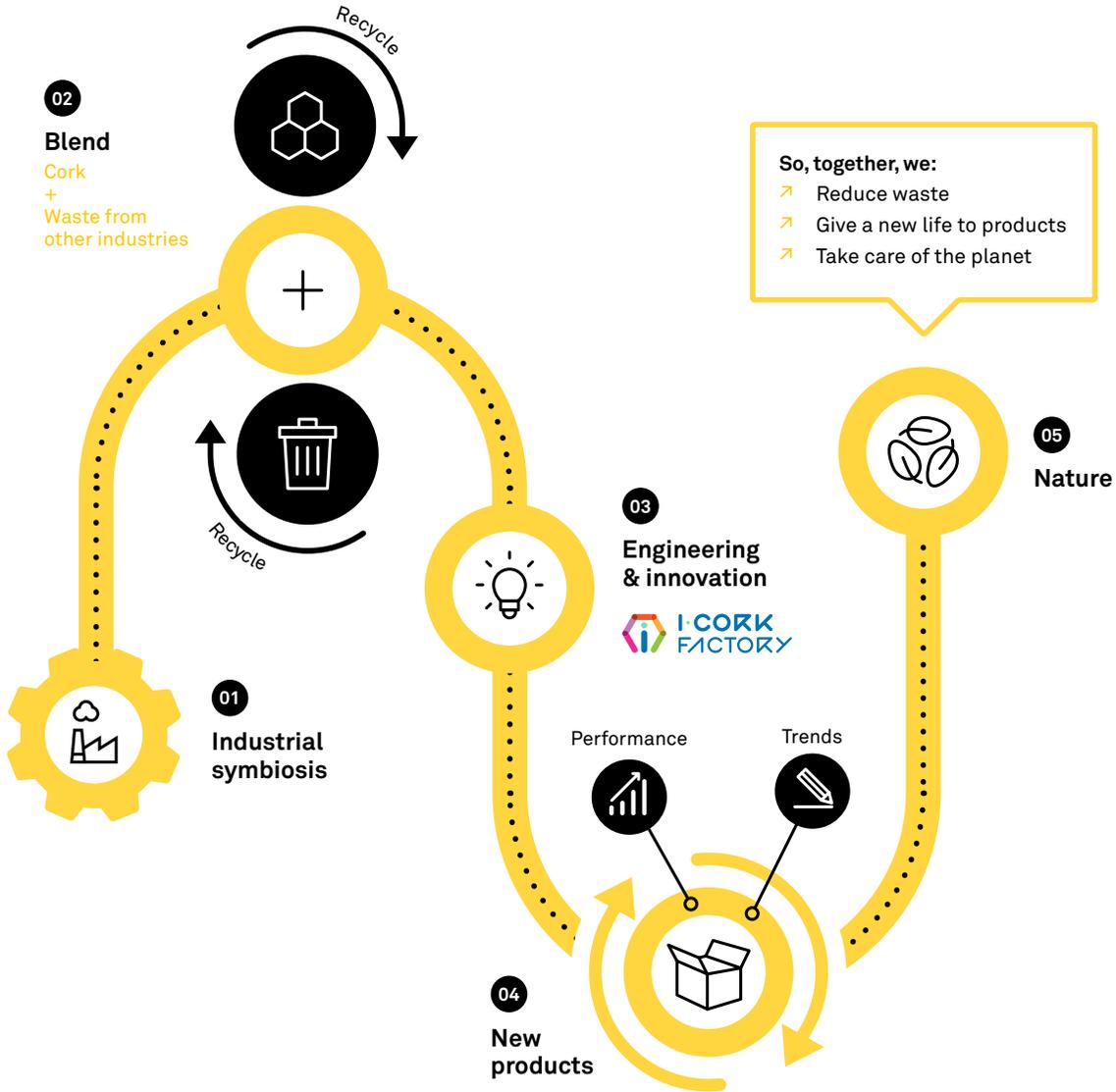
Impermeable to gases

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.



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.



Sealing

Controlled Side Flow

ACCOSEAL® products are especially useful in metal-to-metal joints where the gasket fits into a groove, machined into one flange. No allowance need be made for side flow if cork-rubber material of the proper firmness is selected. The compressibility of cork-rubber can be used in place of more expensive noncompressible molded rubber O-rings.

Friction

Some of the friction of cork is retained in ACCOSEAL® compounds and helps to reduce extrusion or slippage of the gaskets.

Conformability Products

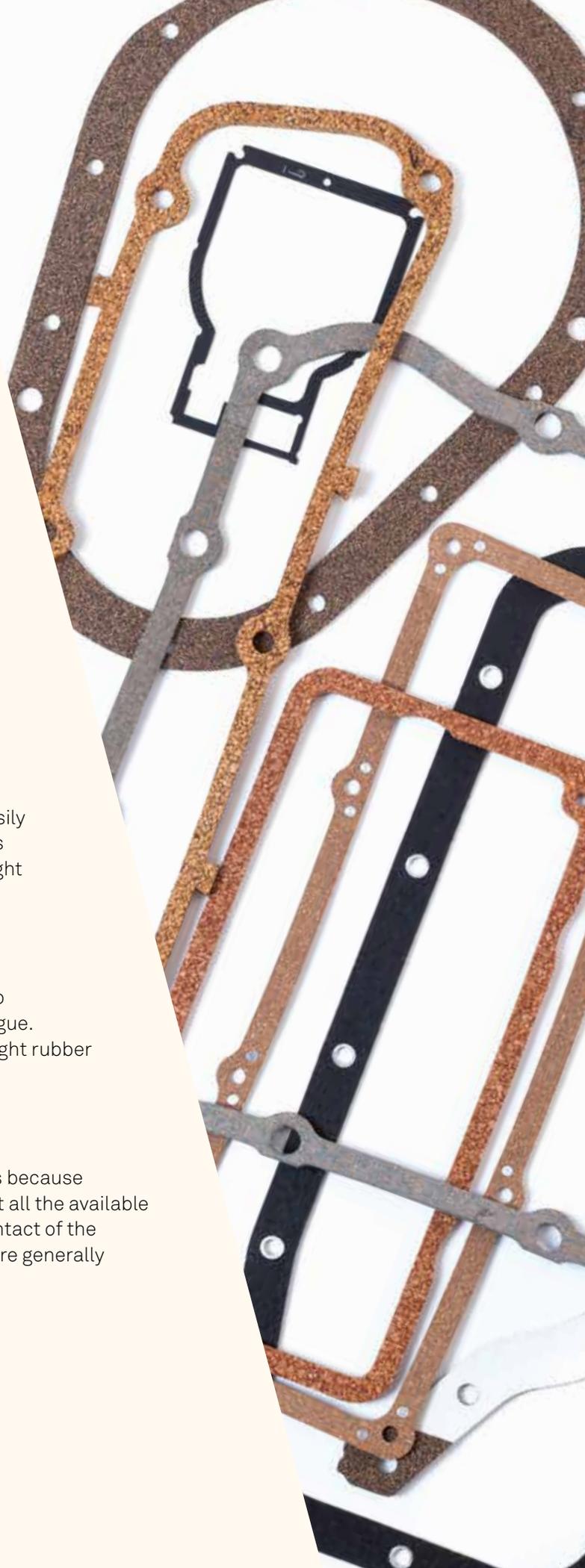
ACCOSEAL® stocks, particularly the sponged materials, will easily conform to and compensate for minor flange irregularities. This characteristic is especially useful in stamped or other lightweight assemblies where the available bolt load is usually low.

Fatigue Resistance

ACCOSEAL® compounds have unusual resilience which helps to provide resistance to compression set and other effects of fatigue. Corkrubber gaskets are more resistant to aging than their straight rubber counterparts.

Sealability

Unspinged ACCOSEAL® compounds are essentially impervious because rubber is the continuous phase of the materials. This means that all the available unit loading can be used to establish and maintain intimate contact of the gasket to the flange. The seal points of ACCOSEAL® materials are generally among the lowest of all resilient gaskets.





Product Range

Material	Characteristics and Uses	Type	Compressibility % @ 28 kg/cm ² (400 psi)	Minimum Recovery %	Hardness Shore Type A	Volume Change %		
						ASTM Oil N°. 1 70 hrs. @ 100°C (212°F)	ASTM Oil N°. 3 70 hrs. @ 100°C (212°F)	ASTM Fuel A 22 hrs. @ 21.1 – 29.4°C (70–85°F)
DC-100 F229000M1S9 (Sheets)	General-purpose gasket and sealing material; high cork content, minimum side flow.	Cork and oil-resistant synthetic rubber	25-45	70	55-75	-10 to +20	0 to +80	0 to +30
DC-179 F227000M1S9 (Sheets)	Highly compressible material for low bolting pressures.	Cork and oil-resistant synthetic rubber	35-50	80	55-70	-5 to +10	15 to +50	0 to +10
DC-205 F229000M1S9 (Sheets & Rolls)	Economical, highly compressible material for low bolting pressures.	Cork and oil-resistant synthetic rubber	15-35 (sheets) 25-45 (rolls)	70 (sheets) 70 (rolls)	60-80 (sheets) 55-75 (rolls)	-15 to +10	0 to +50	-5 to +15
LC-800 F229000M1S9 (Sheets)	Outstanding flexibility and resilience over wide range of temperatures. Excellent for coolant use.	Cork and silicone (Si)	10-30	70	65-80	-10 to +15	0 to +50	-
NC-709 F227000M1S9 (Sheets)	Soft, highly compressible for low bolting pressures; oil and solvent resistance.	Cork and aromatic fuel resistant synthetic rubber	30-50	75	50-70	-20 to +15	-15 to +25	-5 to +10
NC-710 F229000M1S9 (Sheets & Rolls)	Medium compressibility, with maximum oil and solvent resistance. UL Listed	Cork and aromatic fuel resistant synthetic rubber	20-45 (sheets) 25-45 (rolls)	75 (sheets) 70 (rolls)	60-75	-15 to +10	-15 to +35 (sheets) -10 to +20 (rolls)	-5 to +10
NC-711 F229000M1S9 (Sheets & Rolls)	Low compressibility, with maximum oil and solvent resistance. UL Listed	Cork and aromatic fuel resistant synthetic rubber	10-25 (sheets) 15-30 (rolls)	75 (sheets) 75 (rolls)	70-85 (sheets) 70-85 (rolls)	-15 to +10 (sheets) -10 to +10 (rolls)	-10 to +15 (sheets) -5 to +15 (rolls)	-10 to +10 (sheets) -5 to +10 (rolls)
NC-733 (Friction Material) F229000M1S9 (Sheets)	Performs in a wide range of wet or dry friction applications, operating successfully on jobs ranging from printer drives to heavy-duty transmissions in tractors and road graders.	Synthetic rubber and highest quality granulated cork	10-30	65	70-90	-15 to +5	-10 to +15	-10 to +10
NL-76 F239000M1S9 (Sheets)	Highly compressible. Resists fatigue; for cushion pads, low sealing stress requirements.	Sponged synthetic rubber and cork	30-45 @ 7 kg/cm ² (100 psi)	75	30-50	-10 to +10	-10 to +40	-5 to +15
NC711G F229000M2S9 (Rolls)	High quality, low compressibility with excellent chemical resistance to all fuel types. UL Listed	Cork and Epichlorohydrin rubber	15-30	60	70-85	-10 to +10	-5 to +15	-5 to +10

Typical Values

All values are average values determined in accordance with ASTM F 104 testing methods for Type 2 materials. Should not be used as basis for material specifications. Material thickness of 1.6 mm (.062") used for all testing.

Forms and Sizes

Sheets – Below .8 mm (1/32") thickness, available in 228 mm x 914 mm sheets (9" x 36"); .8 mm and above (1/32") thickness, available in 914 mm x 914 mm sheets (36" x 36"). Rolls – DC-100, DC-205, NC-710, and NC-711 are available in 1.016 m wide rolls (40") in thicknesses ranging from .8 mm (1/32") to 4.8 mm (3/16").

The data provided in this brochure refers to typical figures. This information is not intended to be used as a purchasing specification and does not imply suitability for use in any specific application. Failure to select the proper product may result in either product damage or personal injury. Please contact Amorim Cork Composites regarding recommendations for specific applications. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties of merchantability or of fitness for any particular purpose. Amorim Cork Composites shall not be liable for any indirect, special, incidental, consequential or punitive damages as a result of using the information listed in this brochure, any of its material specification sheets, its products or any future use or re-use of them by any person or entity. **For contractual purposes, please request our Product Specifications Sheet (PDA).**



AMORIM CORK COMPOSITES

Rua de Meladas, 260 - P.O. Box 1
4536-902 Mozelos - VFR

Portugal

T. +351 22 747 5300

F. +351 22 747 5301

E. 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. acc@amorim.com

www.amorimcorkcomposites.com