

# AMORIM EXPANDACORK

Construction



## Reinventing expansion joints

Using cork  
to fill the gap

AMORIM CORK 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 centimeter 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 specialized 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 harvested around 17 times. This means that cork is not only a natural raw material, it is also renewable and recyclable.



Easy installation (optional mastic utilization)



Water resistant



Follows the natural movement of joints



Resistant to intense traffic



Great longevity without maintenance requirements



No protrusions and entirely contained within the joint







## Using nature to fill the gap

Designed to fill gaps left between expansion joints in concrete structures, Expandacork products absorb vibration, and allow for expansion and contraction caused by heat in different construction materials.

Dilation joints enable the movement of structures without causing consequent damage and ensuring that these spaces are always filled. They are commonly applied in concrete, brick and block work, tunnels, water storage and supply systems, aqueducts, dams, airport runways and taxi tracks, concrete roads and parking areas or even as a backup support for sealants.

As a sustainable material, Expandacork possesses excellent technical performance such as high durability, recovery, environmental resilience and resistance to water, oil and acid.

Expandacork products maintain their features over time and can be easily fitted without requiring specialized labor, saving installation costs.



Concrete

Expansion joint

Concrete



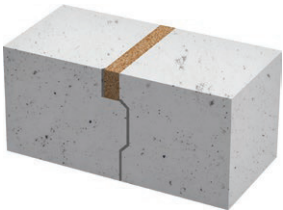
# The various types of joints used in construction

Expandacork products are suitable for a broad variety of applications:

Expansion joint



Contraction joint



Cover joint



Curved joint



Simulated joint



Metal element joint



# The right choice for large thermal ranges

The unique flexibility of Expandacork products allows them to be easily installed with the capacity to resist continuous deformations caused by different climate conditions. Since Expandacork does not deteriorate, the joint remains appropriately filled.

Expandacork materials offer long-term performance required on high-end projects within the construction industry.

## Standard dimensions

	Filling the Joint Type II	Filling the Joint Type III
Thickness	10, 15, 20, 25, 30, 40, 50 mm	10, 15, 20, 25, 30, 40, 50 mm
Width x Length	915 x 610 mm (36 x 24 in)	915 x 610 mm (36 x 24 in)
Other dimensions available upon request		

## Technical specifications

	Filling the Joint Type II	Filling the Joint Type III
Density	120-180 kg/m <sup>3</sup> (7.50-11.24 lb/ft <sup>3</sup> )	250-370 kg/m <sup>3</sup> (15.60-23.10 lb/ft <sup>3</sup> )
Compression	50% of initial thickness with a load between 0.35MPa and 10.35MPa (50 to 1500psi)	
Recovery	≥ 90% of original thickness after 50% compression	
Extrusion	There is a maximum extrusion level beyond the joint of 6.35mm (1/4") when subject to 50% compression.	
Resistance to HCl	Submerged into boiling HCl, Expandacork does not disintegrate	
Expansion	n.a.	Submersed in boiling water for a period of one hour, Expandacork self-expanding cork type III expands at least 40% of its original thickness
Dimensional Variation	n.a.	Expandacork self-expanding cork type III does not display any signs of degradation even after the simulation of ten cycles of ageing and continues to completely seal the joint

Note: Expandacork should be conserved in its original packaging, in a dry place and on a level surface throughout its application; Expandacork Types II and III comply with ASTM1752 & ASTM D 545



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 Solutions' innovation and engineering teams. Cork Inside responds to stringent requirements and guarantees the needed performance required for the application.



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