Reinventing expansion joints
Using cork to fill the gap
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.

EXPANDACORK key features

- Easy installation (Optional mastic utilization)
- Water resistant
- Follows the natural movement of joints
- Resistant to intense traffic
- Great longevity without maintenance requirements
- No protusions and entirely contained within the joint
Designed to fill gaps left between expansion joints in concrete structures, EXPANDACORK products absorb vibration, 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 therefore 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.

Using nature to fill the gap

The additional advantages delivered by cork – such as its high durability, recovery capacity and resilience and its resistance to water, oil and acid – make EXPANDACORK a unique resource, due to both its sustainability and technical performance.

EXPANDACORK products maintain their features stable over time, in line with the global thicknesses and can be easily fitted without requiring specialized labour, saving work time.
The right choice for large thermal ranges

The unique flexibility of EXPANDACORK products not only enables them to be easily deployed but also provides the capacity to resist, without any deterioration, the continuous deformations caused by different climate conditions and thermal range while always ensuring that the joint remains appropriately filled.

EXPANDACORK materials offer a long-term commitment to performance, durability and mechanical resistance, that is required on high-end projects within the construction industry.

STANDARD DIMENSIONS

<table>
<thead>
<tr>
<th></th>
<th>Filling the Joint Type II</th>
<th>Filling the Joint Type III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>10, 15, 20, 25, 30, 40, 50 mm</td>
<td>10, 15, 20, 25, 30, 40, 50 mm</td>
</tr>
<tr>
<td>Width x Length</td>
<td>915 x 610 mm (36 x 24 in)</td>
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Other dimensions available upon request

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
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<th>Filling the Joint Type II</th>
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<tbody>
<tr>
<td>Density</td>
<td>120-180 kg/m³ (7.50-11.24 lb/ft³)</td>
<td>250-370 kg/m³ (15.60-23.10 lb/ft³)</td>
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<tr>
<td>Compression</td>
<td>50% of initial thickness with a load between 0.35MPa and 10.35MPa (50 to 1500psi)</td>
<td>≥ 90% of original thickness after 50% compression</td>
</tr>
<tr>
<td>Recovery</td>
<td></td>
<td></td>
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<tr>
<td>Extrusion</td>
<td>There is a maximum extrusion level beyond the joint of 6.35mm (1/4”) when subject to 50% compression.</td>
<td></td>
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<tr>
<td>Resistance to HCI</td>
<td>Submerged into boiling HCI, EXPANDACORK does not disintegrate</td>
<td>Submersed in boiling water for the period of one hour. EXPANDACORK self-expanding cork type III expands by less than 40% of its original thickness</td>
</tr>
<tr>
<td>Expansion</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Dimensional Variation</td>
<td>n.a.</td>
<td>EXPANDACORK self-expanding cork type III does not display any sign of degradation even after the simulation of ten cycles of ageing and continues to completely seal the joint</td>
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</table>

Note: EXPANDACORK should be conserved in its original packaging in a dry place and a level surface throughout its application; EXPANDACORK Type II and Type III complies with ASTM 1752 & ASTM D1645

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).
The various types of joints used in construction

The existing range of EXPANDACORK applications responds to a broad variety of prevailing technical needs.

- Expansion joint
- Cover joint
- Simulated joint
- Contraction joint
- Curved joint
- Metal element joint