Reinventing expansion joints

Using cork to fill the gap
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 centimeter 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.

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 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.
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

<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>
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<th>Filling the Joint Type II</th>
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<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>
</tr>
<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>≥ 90% of original thickness after 50% compression</td>
<td>Submerged into boiling HCl, EXPANDACORK does not disintegrate</td>
</tr>
<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>EXPANDACORK self-expanding cork type III expands at least 40% of its original thickness</td>
</tr>
<tr>
<td>Resistance to HCl</td>
<td>Submerged into boiling HCl, EXPANDACORK does not disintegrate</td>
<td>Submersed in boiling water for a period of one hour, EXPANDACORK self-expanding cork type III expands at least 40% of its original thickness</td>
</tr>
<tr>
<td>Expansion</td>
<td>n.a.</td>
<td>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</td>
</tr>
<tr>
<td>Dimensional Variation</td>
<td>n.a.</td>
<td>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</td>
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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 ASTM 1752 & ASTM D 545

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 (PDS).
The various types of joints used in construction

EXPANDACORK products are suitable for a broad variety of applications:

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