



## CORKFIL™

RESIN-BONDED CORK JOINT FORMER SHEETS

IMPERIAL SYSTEM PRODUCTS



### CORKFIL™

CORKFIL™ joint formers are made from fine cork granules bonded together with an insoluble synthetic resin.

They contain no bitumen or tar that may migrate onto the concrete wall surface of expansion joints to impair the adhesion of elastomeric joint sealants.

CORKFIL™ is highly recommended for use in the formation of expansion joint width in concrete structures.

It is also used as anti-vibration pads separating machinery plinth from the main structure.

### PROPERTIES OF CORK

Corks are natural extracts from the bark of Cork Oak trees (*Quercus Suber*)

There are about 2,200,00 hectares of cork forest worldwide and Portugal holds 34 % (680,000 hectares) or the largest worldwide acreage of cork forest

Corks elasticity combined with its near- impermeability makes it suitable as a material for bottle stopper, especially for wine bottles. Cork stoppers represent about 60% of all cork based production. Cork has an almost zero Poisson's ratio, which means the radius of a cork does not change significantly when it is squeezed or pulled.

Cork is an excellent gasket material and are used in the production of

- Bottle stoppers
- badminton shuttlecocks
- acoustic and thermal insulation for buildings
- floor and wall tiles
- Fishing floats and handles for fishing rods
- Expansion joint formers



Concerning Greenhouse gases, each plastic stopper releases 10 times more CO<sup>2</sup>, whilst an aluminum screw cap releases 26 times more CO<sup>2</sup> than does a cork stopper

Cork is extracted only from early May to late August, when the cork can be separated from the tree without causing permanent damage.

It is only after 25 – 30 years of age and when the circumference of the tree is 60 cm when the cork can be removed for the first time.



## IMPERIAL SYSTEM PRODUCTS

### APPLICATIONS



#### Joints in water-retaining structures

CORKFIL™ formers are particularly recommended for forming expansion joints in irrigation canals, culverts, dams, reservoirs, sea walls, sewage works, swimming pools, water treatment and storage structures.



#### Joints in traffic surfaces

CORKFIL™ formers are suitable for forming expansion joints in concrete structures and other areas not subjected to heavy traffic.



#### Joints in building substructures and other water-excluding structures

CORKFIL™ formers are recommended for forming expansion joints in basements, site slabs and subways.



#### Joints in roofs and roof finishes

CORKFIL™ formers are recommended for forming expansion joints on cast in situ roof panels.



#### Joints in external walling and cladding

CORKFIL™ formers are recommended for forming structural expansion joints and structural separation joints in brick and in situ concrete construction.



#### Joints in internal floor finishes

CORKFIL™ formers are recommended for forming expansion joints in tiling works where tiled flooring are isolated into 6.4 meter x 6.4 meter panels to allow for differential movement to occur. This reduces the occurrence of cracks in the tiling works.

#### Compression test:

Load required to compress sample to 50% of its original thickness : 0.54 N/mm<sup>2</sup> or (78 lbf/in<sup>2</sup>)

**Specific weight:** +/- 190 kg/m<sup>3</sup>

**Recovery test:** 94%

**Extrusion test:** 0.15 mm  
(extrusion of a 114 mm x 114 mm sample when compressed to 50% with three edges restrained)

#### Insolubility test:

1 hour in boiling hydrochloric acid: no disintegration  
Heat Resistance Test 150°C: no deterioration

**Weathering test:** satisfactory

#### Coverage:

May be used in one or more layers to build up to required thickness

#### Physical or chemical change:

none

#### Application temperature range:

not applicable

#### Characteristics of product during service life

Form : Compressed Sheet

Colour : Brown

Density : 210 kg/m<sup>3</sup>

Hardness & indentation: not applicable

Durability: Excellent

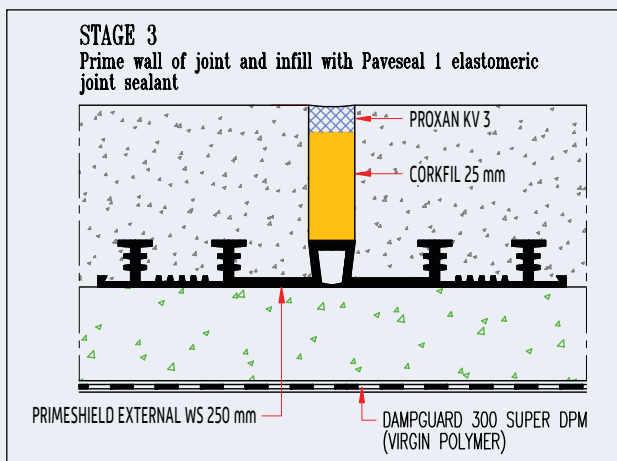
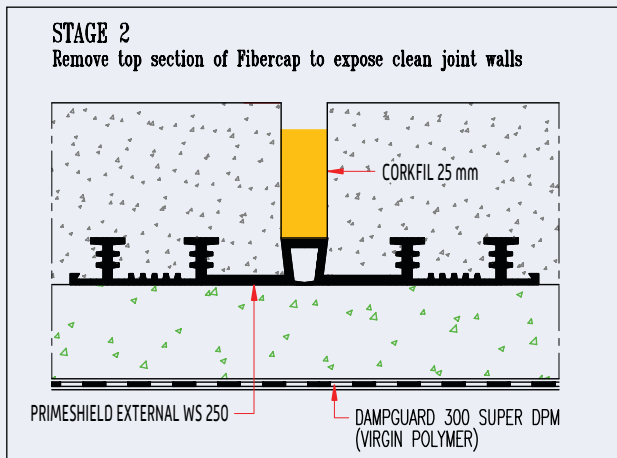
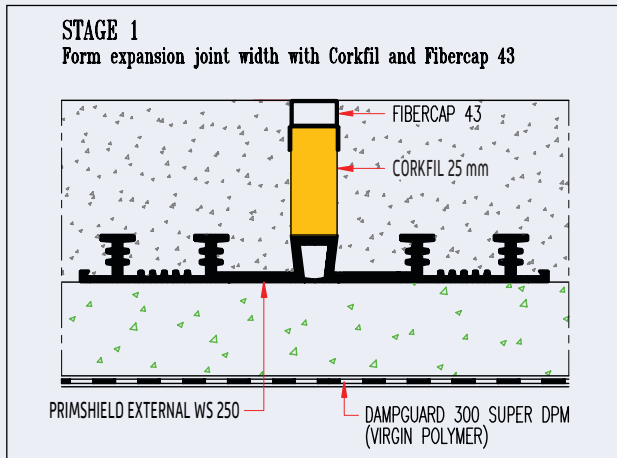
#### Recommended working criteria for product during service life

Movement : 50% maximum compression

Service temperature range : - 40°C to 120°C

IMPERIAL SYSTEM PRODUCTS

Expansion joints in concrete pavement and aprons



**PRUDENT FORETHOUGHTS TO MINIMISE THE RISK OF EXPANSION JOINT MISALIGNMENT, DEFORMATION AND FILLER DECOMPOSITION**

**FIBERCAP™** should be used to insure expansion joint misalignment.

**IMPORTANT NOTE:**

Suppliers have promoted corks to function as a former and sealant on concrete aprons.

These expansion corks have misled design engineers into believing that savings can be made by specifying these self expanding cork without Polysulphide Sealants.

When Self Expanding corks are left to weather in cyclic conditions, degradation or disintergration of bonded cork granules will occur.

It must be realised that cork formers are bounded together with small grains of cork granules into a mass or sheet.

When cork expands, the granules are loosen and will detach and will gradually break off from the mass.

Exposure to weathering quickens the speed of dislodgement.

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