

## High performance, cross linked, closed cell, non-absorbent, polyethylene joint filler

### Uses

Hydrocell XL is a cross linked, non absorbent, semi-rigid, cellular polyethylene joint filler used for forming expansion joints in concrete, brickwork and blockwork. The product provides excellent support to sealants subject to hydrostatic pressure and is particularly recommended for water retaining or water excluding structures.

Hydrocell XL is a high-performance replacement for traditional sponge rubber (ASTM D1752, type 1) and cork (ASTM D1752, type 2) joint fillers.

### Advantages

- Cross linked to resist lateral and hydrostatic pressure
- High density support of sealant to prevent adhesion failure
- Non absorbent closed cell structure
- High compression recovery
- Non-extruding
- Low load transfer to joint edges
- Non tainting
- Chemically resistant
- Natural bond breaker
- Rot proof

### Standards compliance

Water Authorities Association, Civil Engineering Spec. for the Water Industry, 4th Edition Clause 2.124.

UK WFBS listed product – suitable for use in contact with potable water. Listing number 9308528.

DTp Specification for Highway Works, Dec 1991, Series 1000 clause 1015.

Exceeds the performance requirements of ASTM D1752-84 and AASHTO M153-92 for recovery and extrusion.

### Specification

The joint filler shall be cross linked, non absorbent, semi-rigid, cellular polyethylene with a nominal density of 90 to 110kg/m<sup>3</sup>. It shall have a recovery of 98% after 50% compression and a compressive strength of 0.15 N/mm<sup>2</sup> when tested in accordance with ASTM D3575. It shall have a water absorption of less than 0.05% by volume when tested in accordance with ASTM D3575 and be resistant to weathering and chemical attack. The joint filler shall have Water Byelaws Scheme approval for use in contact with potable water.

### Description

Hydrocell XL is a cross linked, semi-rigid, closed cell polyethylene sheet material used for forming or filling expansion joints between adjacent in-situ or precast components. Hydrocell XL provides excellent support backing to elastomeric sealants and is especially recommended for use in expansion joints in brickwork and in the construction of water retaining and water excluding structures.

The compression load properties of Hydrocell XL prevents the transfer of load across movement joints.

Each cell is cross linked thereby preventing breakdown under hydrostatic pressure. The closed cell formation prevents the absorption of water.

### Properties

The value given below are typical figures achieved in laboratory tests. Actual values obtained on-site may show minor variations from those quoted.

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Compressive strength  
(ASTM D3575) : 0.15 N/mm<sup>2</sup>

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Extrusion  
(\*DTp clause 1015) : 0.3mm

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Compression set under constant  
deflection (After 50% compression)  
ASTM D3575 : 21.9%

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Water absorption : 0.17kg/m<sup>2</sup>  
(ASTM D3575)

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Weathering test  
(DTp clause 1015) : No disintegration

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Drinking water approval : WFBS, listing  
(BS6920) number 9308528

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\* These test methods are equivalent to those specified in ASTM D1752

### Chemical resistance

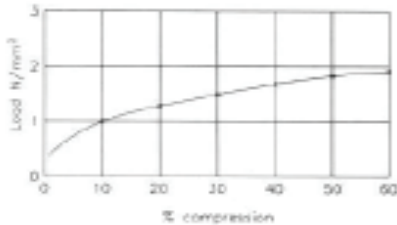
Excellent resistance to acids, alkalis, oxidising agents and biological degradation.

### Compression loading

The load compression curve shown below gives typical compression values achieved in accordance with ASTM D3575.

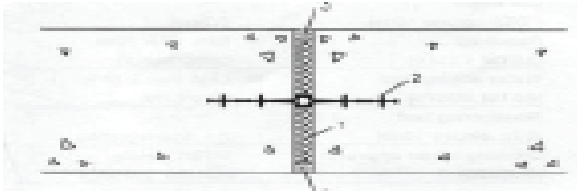
# Hydrocell XL

## Typical load/compression curve



## Design criteria

Typical detail of a wall expansion joint occurring in a closed reservoir



- 1 Hydrocell XL
- 2 Supercast Hydrofoil
- 3 Thioflex 600

## Instructions for use

### Joint sealing slots

When forming expansion joints with Hydrocell XL in in-situ concrete, joint sealing slots can be readily formed in the following manner. Before installing, simply cut off a strip to the

required depth. Pin the strip back on using two-inch nails at approximately 100 mm intervals. Then install the filler flush with the finished surface. Prior to sealing the top strip can then be pulled easily from the joint to provide an uncontaminated sealing slot ready for preparation and sealing.

As elastomeric sealants will not bond to Hydrocell XL the additional need for bond breaker strips is eliminated.

## Limitations

Hydrocell XL should not be used when the operational temperature is continuously outside the range of -70°C to 100°C.

## Estimating

### Supply

Hydrocell XL :	1.2 m X 2.4m sheets
Thickness :	10mm, 20mm & 25mm

## Storage

Hydrocell XL should be stored in a clean area and should not be left exposed to direct sunlight for long periods, especially in hot climates.

## Precautions

There are no health hazards associated with Hydrocell XL in normal use.