



CONSTRUCTION CHEMISTRY

Expanbar* BB20

Swellable bentonite base waterstop

Uses

Integral sealing for construction joints in concrete cast in-situ.

Sealing of joints for foundation walls slabs, slab-on-grade, precast wall panels, manholes, pipe connection, box culverts, utility and wet walls, potable water tanks and water retaining structures.

Typical uses include secant piled and diaphragm walled basements, pile caps and casting against old concrete.

Expanbar* BB20 can provide simple solutions to detailing pipe entries, construction joints in the vertical plane and to kicker joints.

Can be linked to Expanbar* PVC waterstop to give an effective combination of waterstop which maintain network continuity.

Advantages

- Easy to install.
- Expanbar Adhesive, enable full integration of Expanbar* BB20 and Expanbar PVC networks.
- Solves detailing problems in conjunction with Expanbar PVC range.
- Swelling properties unaffected by long term wet/dry cycling.
- Delayed swell action allows extra tolerance on site.
- Sustains effective seal in wet conditions.

Standards compliance

Suitable for use in contact with potable water.

Description

The Expanbar* BB20 is a butyl rubber swellable waterstop which can be installed and positively linked into conventional Expanbar PVC waterstop networks. This allows the use of Expanbar PVC for expansion joints and Expanbar* BB20 for construction joints all the time maintaining an integrated network.

The Expanbar* BB20 is made from high butyl bentonite clay. The swelling action is the result of contact with water.

Design criteria

Expanbar* BB20 should be used to prevent the passage of water through non-movement joints in both new in-situ concrete and between new and existing concrete. Expanbar* BB20 increases in volume in the range of up to 350% and gives a resistance to hydraulic heads of up to 60 meters.

Swelling of Expanbar* BB20 in fresh concrete is minimal, therefore maximizing the positive pressure to seal the

Expanbar* BB20 is suitable for application between existing and newly placed concrete where there is little or no steel continuity and where 2 mm movement may occur. Expanbar* BB20 waterstop should be positioned to ensure that a minimum of 50 mm cover of concrete is present to accommodate pressure developed during the swelling process.

Properties

Form	: Black Rectangular strips
Size	: 20mm x 15mm
Solids content	: 100%
Unrestrained volumetric expansion	: Up to 350%
Application temperature range	: -10° to 50°C
Service temperature range:	-15° to 60°C
Hydrostatic pressure resistance	: 60 meters (6bar)
Water tightness	: Seals up to 2 mm gap

Specification

Supplier specification

Water swellable - Basic bentonite clay - hydrophilic waterstop (and attachments) where shown on the drawings, shall be Expanchem Expanbar* BB20 obtained from Expanchem. It shall be used in accordance with the manufacturer's current application instructions



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Performance specification

Water swellable hydrophilic waterstop, where shown on the drawings, shall be made from a bentonite clay strip which can integrate into existing waterstop networks. The waterstop shall have an unrestrained volumetric expansion of up to 350%. It must not deteriorate under prolonged wet/dry cycling. It must be able to withstand a hydrostatic head of 60 meters (6 bars). It shall be used in accordance with the methods given in the manufacturer's current data sheet.

Instructions for use

Expanbar* BB20 may be positioned by bonding with an appropriate adhesive/steel nail or can be installed without adhesive in horizontal position. The waterstop may be installed either into a groove cast in the concrete or directly onto the concrete surface.

Limitations

Expanbar* BB20 should not be used for expansion joints or those subject to significant repetitive movements.

Expanbar* BB20 should not be installed with less than 50 mm of concrete cover to ensure that the pressure arising from the swelling action is accommodated.

Expanbar* BB20 should not be used in locations which allow free unrestrained swelling.

Carefully install Expanbar* BB20 using nailing, as nails can damage the concrete.

Estimating

Supply

Expanbar* BB20 : 20mm x 15mm x 5 meter rolls

Storage

When stored in cool dry conditions, away from sunlight, in the original, unopened packing Expanbar* BB20 have a shelf life of 12 months.

Precautions

Health and safety

There are no health hazards associated with Expanbar*BB20 in normal use.

Ancillary materials Expanbar* Adhesive.

Expanbar* Adhesive

Form	: Grey or Black paste
Application temp.	: 5 °C to 30 °C
Max open time	: 30 minutes
Concrete pour	: 2 to 8 hours
Adhesion	: Can be used on damp concrete provided it is rag dry

The above data represents typical values and should not be considered as a purchase specification



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* Denotes the trademark registered.

REGIONAL SALES OFFICES IN PAKISTAN:

Fospak (Pvt) Ltd.**Head Office**

702, Business Avenue,
Block-6, PECHS., Shahra-e-Faisal,
Karachi, Pakistan.

Tel # +92-21-34528477, 34529859

Fax # +92-21-34522436

Email : info.khi@fospak.com.pk

Lahore Sales Office

2nd Floor Sarwar Shaheed Plaza,
Cavalry Ground,
Main Boulevard, Lahore Cantt,
Lahore, Pakistan.

Tel # +92-42-36675773

Fax # +92-42-36675838

Email : info.lhr@fospak.com.pk

Rawalpindi Sales Office

1st Floor,
Al-Harmin Plaza,
Main Murree Road,
Rawalpindi, Pakistan.

Tel # +92-51-9290592

Fax # +92-51-9290590

Email : info.isb@fospak.com.pk

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