

# Expanbar\* SW20



CONSTRUCTION CHEMISTRY

**High performance swellable waterstop for in-situ concrete**

## Uses

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

Convenient and problem solving in situations where a conventional waterstop would require complex shuttering

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

Expanbar\* SW20 can provide simple solutions to detailing pipe entries, construction joints in the vertical plane and to kicker joints.

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

## Advantages

- Easy to install.
- Expanbar Adhesive, enable full integration of Expanbar SW20 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 SW20 is a 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\* SW20 for construction joints all the time maintaining an integrated network.

The Expanbar\* SW20 is made from high performance synthetic elastomer strips. The swelling action is the result of contact between water and hydrophilic groups which are part of the Expanbar\* SW20 'Basic Polymer' molecular structure.

The hydrophilic groups are not subject to extraction or loss of swelling performance by prolonged or repeated wetting. This is a unique feature of the basic polymer. Expansion of the waterstop creates a positive pressure

against the face of the concrete joint, thus preventing water passing through the protected joint.

## Design criteria

Expanbar\* SW20 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\* SW20 increases in volume in the range of up to 300% and gives a resistance to hydraulic heads of up to 60 meters.

Swelling of Expanbar\* SW20 in fresh concrete is minimal, therefore maximizing the positive pressure to seal the

Expanbar\* SW20 is suitable for application between existing and newly placed concrete where there is little or no steel continuity and where up to 2mm movement may occur. Expanbar\* SW20 waterstops should be positioned to ensure that a minimum of 80 mm cover of concrete is present to accommodate pressure developed during the swelling process.

## Properties

<b>Form</b>	: Blue / Black Rectangular strips
<b>Size</b>	: 10mm x 20mm
<b>Solids content</b>	: 100%
<b>Unrestrained volumetric expansion</b>	: Up to 300%
<b>Application temperature range</b>	: -20° to 50°C
<b>Service temperature range</b>	: -30° to 70°C
<b>Hydrostatic pressure resistance</b>	: 60 meters (6bar)
<b>Water tightness</b>	: Seals up to 2mm gap (If used in conjunction with Expanbar Adhesive)

## Specification

### Supplier specification

Water swellable - Basic Polymer - hydrophilic waterstop (and attachments) where shown on the drawings, shall be Expanchem Expanbar SW20 obtained from Expanchem. It shall be used in accordance with the manufacturer's current application instructions



CONSTRUCTION CHEMISTRY

---

---

### Performance specification

Water swellable - Basic Polymer - hydrophilic waterstop, where shown on the drawings, shall be made from a preformed elastomeric strip which can integrate into existing waterstop networks. It shall be free from rubber, bentonite or other inclusions. The waterstop shall have an unrestrained volumetric expansion of upto 300%. 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\* SW20 may be positioned by bonding with an appropriate adhesive. The waterstop may be installed either into a groove cast in the concrete or directly onto the concrete surface.

### Limitations

Expanbar\* SW20 should not be used for expansion joints or those subject to significant repetitive movements.

Expanbar\* SW20 should not be installed with less than 80 mm of concrete cover to ensure that the pressure arising from the swelling action is accommodated.

Expanbar\* SW20 should not be used in conjunction with air-entrained concrete.

Expanbar\* SW20 should not be used in locations which allow free unrestrained swelling.

Installation using nailing is not recommended as nails can damage the concrete.

### Estimating

#### Supply

**Expanbar\* SW20** : 20mm x 10mm x 10 meter rolls

---

### Storage

When stored in cool dry conditions, away from sunlight, water and moisture in the original unopened packing the product has no expiry.

### Precautions

#### Health and safety

There are no health hazards associated with Expanbar\* SW20 in normal use.

Ancillary materials Expanbar\* Adhesive

#### Expanbar\* Adhesive

---

**Form** : Grey 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



CONSTRUCTION CHEMISTRY

---

---

\* Denotes the trademark registered.

#### REGIONAL SALES OFFICES IN PAKISTAN:

##### **Fospak (Pvt) Ltd.**

##### **Head Office**

702, Business Avenue,  
Block-6, PECHS., Shakra-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

##### **Important note**

Expanchem Fospak products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Expanchem Fospak endeavours to ensure that the technical information on this data sheet is correct at the time of printing, it is the customer's responsibility to satisfy himself, by checking with the company that this information is still current at the time of use, that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended. Because Expanchem Fospak has no control over the conditions of use of its products, all recommendations or suggestions regarding the use of these products are made without guarantee.

[www.fospak.com](http://www.fospak.com)