

Swellable Water Bar

Swellable Waterstops 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. The Silica SWB Pro 20 SW range can provide simple solutions to detailing pipe entries, construction joints in the vertical plane and to kicker joints.

They can be linked to Silica SWB Pro 20 PVC waterstops to give an appropriate effective combination of waterstops which maintain network continuity.

Advantages

- Easy to install by adhesive bonding, or casting into joint faces
- Silica SWB Pro 20 SW enables full integration of Silica SWB Pro 20 SW and Silica SWB Pro 20 PVC networks
- Silica SWB Pro 20 SW Adhesive can be applied to damp substrates
- Solves detailing problems in conjunction with Silica SWB Pro 20 PVC waterstops
- Swelling properties unaffected by long term wet/dry cycling
- Tolerant of salts in concrete and groundwater
- Sustains effective seal in wet conditions
- Highly adaptable to accommodate complex joint shapes

Description

The Silica SWB Pro 20 SW range consists of swellable waterstops; Silica SWB Pro 20 SW formed sections, gun-applied paste and Silica SWB Pro 20 SW Adhesive.

Silica SWB Pro 20 SW sections are made from high performance synthetic elastomer strips. The swelling action of the Silica SWB Pro 20 SW range is the result of contact between water and hydrophilic groups which are an intimate part of the Silica SWB Pro 20 SW polymeric structure. These hydrophilic groups are not subject to extraction and loss of swelling performance by prolonged or repeated wetting.

Expansion of the waterstop creates a positive pressure against the faces of the concrete joint, thus preventing water passing through the joint.

Silica SWB Pro 20 SW is a grey, elastomeric water- swellable gun applied paste. Silica SWB Pro 20 SW can be used as a swellable adhesive to adhere Silica SWB Pro 20 SW waterstop to concrete. It has the capability to fill undulations and surface holes in the concrete beneath the waterstop and swell into these when required.

Silica SWB Pro 20 SW also enables Silica SWB Pro 20 SW sections to be linked into conventional Silica SWB Pro 20 PVC waterstop networks. This allows the use of Silica SWB Pro 20 PVC for expansion joints and Silica SWB Pro 20 SW for construction joints whilst maintaining an integrated waterproofing network.

Design criteria

Silica SWB Pro 20 SW 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. Silica SWB Pro 20 SW increases in volume up to a maximum of 500% and gives resistance to hydraulic pressure.

Swelling of Silica SWB Pro 20 SW in fresh concrete is minimal therefore maximising the positive pressure seal provided by the hydrophilic to the protected joint.

Silica SWB Pro 20 SW20 has a larger section and so offers a greater surface area of contact to the concrete in areas of higher risk, such as when waterproofing Grade 3 basements. All Silica SWB Pro 20 SW10, SW20, SW25 have a delayed swell action which helps prevent pre-swell during wet site conditions (see limitations).

The minimum thickness of concrete cover required to accommodate pressure developed during the swelling process is 75mm for Silica SWB Pro 20 SW 10, 80mm for SW20 and 90mm for SW25.

Standard compliance

Silica SWB Pro 20 SW10, SW20 and SW25 are suitable for use in contact with potable water and are Water Regulations Advisory Service approved products. Drinking Water Inspectorate Regulation 25(1)b of the Water Supply (Water Quality) Regulations 1989.



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Swellable Water Bar

Water swellable polymeric 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 up to 300%. It must not deteriorate under prolonged wet/dry cycling. It must be able to withstand a hydrostatic head of up to 50 metres (refer SW grade). It shall be used in accordance with the methods given in the manufacturer's current data sheet.

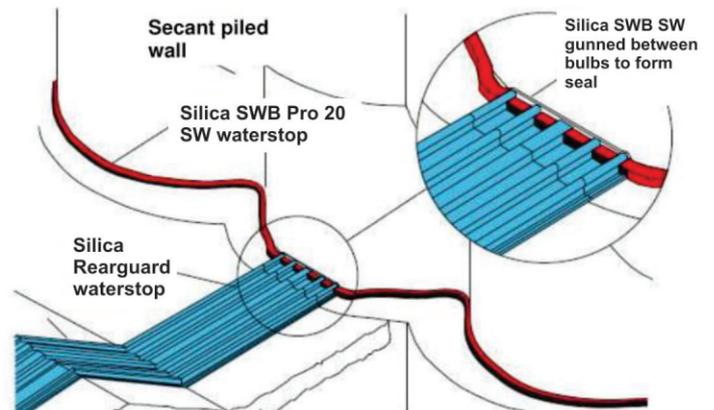
Form: Rectangular section elastomeric strips

Size:
 Silica SWB Pro 20 SW10: 10 mm x 20 mm
 Silica SWB Pro 20 SW20: 20 mm x 20 mm
 Silica SWB Pro 20 SW25: 25 mm x 20 mm

Other sizes on request.

Solids content:	100%
Colour: Silica SWB Pro 20:	Black
Unrestrained volumetric Expansion ratio:	Up to 500%
Application temperature Range:	-5°C to 50°C
Service Temperature Range:	-30°C to 70°C
Hydrostatic pressure Resistance*:	SW10: 30 metres SW20: 50 metres SW25: 70 metres

*(In concrete construction joint with no movement)



Silica SWB Pro 20 SW, Deesa SWB Pro 20 SWX and Silica SWB Pro 20 Rearguard waterstops at secant pile wall and floor slab junction

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