

High performance swellable waterstop for in-situ concrete

Uses

Integral sealing for construction joints in concrete cast insitu.

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. Supercast SW20 can provide simple solutions to detailing pipe entries, construction joints in the vertical plane and to kicker joints. Can be linked to Supercast PVC waterstops to give an effective combination of waterstops which maintain network continuity.

Advantages

- Easy to install
- Supercast SWX swellable adhesive enables full intergration of Supercast SW20 and Supercast PVC networks
- Solves detailing problems in conjunction with Supercast PVC range
- Swelling properties unaffected by long term wet/dry cycling
- Delayed swell action allowing extra tolerance on site
- Sustains effective seal in wet conditions

Standards Compliance

Suitable for use in contact with potable water - Water Byelaws Scheme Approved product.

Description

The Supercast SW20 is a swellable waterstop which can be installed and positively linked into conventional Supercast PVC waterstop networks. This allows the use of Supercast PVC for expansion joints and Supercast SW20 for construction joints all the time maintaining an integrated network.

The Supercast 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 Supercast 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

Supercast 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. Supercast SW20 increases in volume in the range of upto 300% and gives a resistance to hydraulic heads of upto 60 meters. Swelling of Supercast SW20 in fresh concrete is minimal, therefore maximising the positive pressure to seal the joint.

Supercast 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. Supercast 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

Form	Red Rectangular section elastomeric strips
Size	10mm x 20mm and Profile size of 25.4mm is also available
Solid content	100%
Unrestrained volumetric expansion	upto 300%
Application temperature range	-20 ^o to 50 ^o C
Service temperature range	-30 ^o to 70 ^o C
Hydrostatic pressure resistance	60 meters (6 bar)
Water tightness	Seals up to 2mm gap if used in conjunction with Supercast SWX or Supercast SW Adhesive

Specification

Supplier Specification

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

Performance Specification

Water swellable - Basic polymer - hydrophilic waterstop, where shown on the drawings, shall be made from a performed elastomeric strip that can integrate into existing waterstop networks. It shall be free from rubber, bentonite and other inclusions. The waterstop shall have an unrestrained volumetric expansion of upto 300%. It not must deteriorate under prolonged wet/dry cycling. It must be able to withstand a hydrostatic head

Fosroc Supercast SW20



of 60 meters (6 bars). It shall be used in accordance with the methods given in the manufacturer's current datasheet.

Instructions for use

Supercast SW20 may be positioned by bonding with either Supercast SWX or Supercast SW adhesive. The waterstop may be installed either into a groove cast in the concrete or directly onto the concrete surface.

Limitations

Supercast SW20 should not be used for expansion joints or those subject to significant repetitive movements. Supercast SW20 should not be installed with less than 80mm of concrete cover to ensure that the pressure arising from the swelling action is accommodated. Supercast SW20 should not be used in locations that allow free unrestrained swelling. Installation using nailing to augment fixing may be required if so ensure it is limited to both ends of the rolls. Use Supercast SWX adhesive where nails are used to ensure water tightness

Estimating

Supply

Supercast SW20 : 5m x 10mm x 20mm rolls
Profile size of 25.4mm x 25.4mm is also available.

Storage

When stored in cool dry conditions, away from sunlight, in the original, unopened containers Supercast SW products have a shelf life of 12 months.

Precautions

Health & Safety

There are no health hazards associated with Supercast SW20 in normal use.

Ancillary materials

Supercast SWX

Form	Elastomeric water swelleable paste
Colour	Grey
Tack-free time	Approx. 1 hour(20°C/50% RH)
Cure rate	3mm in 24 hours
Volume swell ratio	200%
Concrete pour	2 to 8 hours
Adhesion	Can be used on damp concrete provided it is rag dry

Supercast SW 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.



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