

# Supercast SW10

General purpose swellable waterstop for in-situ concrete

## Use

Integral sealing for construction joints in concrete cast in-situ

## Advantages

- Cost-effective alternative to PVC
- Easy to install by bonding, nailing or casting into joint faces
- Factory-made connectors enable full integration of Supercast SW10 and Supercast PVC networks
- Good durability during wet/dry cycling
- Tolerant of salts in concrete and groundwater
- Sustains effective seal in wet conditions
- Highly adaptable to accommodate complex joint shapes

## Standards compliance

Suitable for use in contact with potable water – Water Byelaws Scheme Approved Product: Listing No.9701510.

## Description

The Supercast SW range consists of swellable waterstops, fixing adhesives and attachments which enable Supercast SW sections to be installed and positively linked into conventional Supercast PVC waterstop networks. This allows the use of Supercast PVC for expansion joints and Supercast SW10 for construction joints all the time maintaining an integrated network.

Supercast SW10 is a blended polymer hydrophilic waterstop. The swelling action is the result of contact between water and hydrophilic groups in the polymers' molecular structure. These hydrophilic groups display good consistency in swell rate during repeated wet/dry cycling.

Expansion of Supercast SW10 creates a positive pressure against the faces of the concrete joint. Thus preventing water passing through the protection joint.

## Technical support

Fosroc offers a comprehensive range of high performance, high quality, construction products all backed by a BS EN ISO 9001 registered quality scheme. Fosroc offers a technical support package to specifiers and contractors which includes computer – aided design (CAD) standard details and technical advice from staff unrivalled experience in the industry.

## Design criteria

Supercast SW10 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 SW10 increases in volume between 200% and 300%. Swelling of Supercast SW10 in fresh concrete is minimal and most of the volume swell takes place after the initial hardening of the concrete has taken place.

Supercast SW10 waterstop should be positioned to ensure that a minimum of 70mm. cover of concrete is present to accommodate pressure developed during the swelling process.

It is recommended that the strip is fixed by both adhesive and mechanical means to ensure maximum contact with the joint faces and to avoid displacement when pouring the fresh concrete.

## Properties

<b>Form:</b>	Rectangular section elastomeric strips
<b>Nominal size:</b>	5mm. X 20mm.
<b>Solid Contents:</b>	100%
<b>Colour:</b>	Black
<b>Hardness Shore 'A':</b>	45
<b>Unrestrained Volumetric Expansion Ratio:</b>	300% maximum
<b>Application Temperature Range:</b>	-5°C to 50°C
<b>Service Temperature Range:</b>	-30°C to 70°C

# Supercast SW10

## Specification clauses

### Supplier specification

Water swellable – Blended Polymer – hydrophilic waterstop (and attachments) shall be Supercast SW10, obtained from Fosroc. It shall be used in accordance with the manufacturer's current application instructions.

### Performance specification

Water swellable – Blended Polymer – hydrophilic waterstop shall be made from a preformed elastomeric strip which can integrate into existing waterstop networks. The waterstop shall have an unrestrained volumetric expansion of not more than 300%. It shall not deteriorate under prolonged wet/dry cycling. It must be used in accordance with the methods given in the manufacturer's current datasheet.

### Application instructions

Supercast SW10 may be positioned by bonding with the appropriate Supercast SW Adhesive. The waterstop may be installed either into a groove cast in the concrete or directly onto the concrete surface. It is recommended that the waterstop is fixed using both Supercast SW Adhesive in addition to a mechanical fixing method.

### Limitations

Supercast SW10 should not be used for expansion joints or those subject to significant repetitive movements.

Supercast SW10 should not be installed with less than 70mm. of concrete cover to ensure that the pressure arising from the swelling action is accommodated.

Supercast SW10 should not be used in locations which allow free unrestrained swelling.

### Estimating

#### Supply

<b>Supercast SW10:</b>	15 metre rolls
<b>Supercast SW Contact Adhesive:</b>	1 litre tins, 10 per carton
<b>Supercast SW Gun Grade Adhesive:</b>	310 ml. cartridge packed in cartons of 10
<b>Supercast Connectors and Adaptors:</b>	Supplied singly

## Coverage

<b>Supercast SW10:</b>	Usually single run of strip per joint
<b>Supercast SW Contact Adhesive:</b>	30 to 40 linear metre per litre
<b>Supercast SW Gun Grade Adhesive:</b>	6mm. diameter bead 11 metres run per cartridge

The above coverage are approximate and make no allowances for wastage.

## Storage

### Supercast SW Connectors and Adaptors

#### Shelf life

12 months if stored in original unopened cartons or bags in cool, dry conditions, away from sunlight.

### Supercast SW Adhesives

#### Shelf life

12 months if stored in original unopened tins or cartons in cool, dry conditions.

Refer to 'Precautions' if storing these products in bulk. Should be stored in accordance with the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972

## Precautions

### Health and safety

**Supercast SW10:** There are no known health hazards associated with Supercast SW10 in normal use.

**Supercast SW Adhesive:** Highly flammable liquids. Keep away from sources of ignition – **No smoking**. Avoid contact with skin and eyes and inhalation of vapours. Wear suitable protective clothing, gloves and eye/face protection. Use only in well ventilated areas.

### Fire

**Supercast SW Adhesives** are highly flammable. Do not expose to naked flames or other sources of ignition – No smoking. Containers should be tightly sealed when not in use. In the event of fire, extinguish with CO<sub>2</sub>, dry powder or foam. Do not use water.



# Supercast SW10

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## Ancillary materials

### Supercast SW Contact Adhesive

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**Form:** Brown liquid

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**Application temperature:** 5°C to 30°C

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**Maximum open time:** 30 minutes

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**Peel adhesion (Supercast SW/concrete):** 40 N/20mm.

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**Impact adhesion (Supercast SW/concrete):** 13.5 N/m.

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**Flash point:** 0°C

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### Supercast SW grade Adhesive

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**Form:** Buff paste

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**Application temperature:** 5°C to 30°C

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**Maximum open time:** 30 minutes

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**Peel adhesion (Supercast SW/concrete):** 30 N/20mm.

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**Impact adhesion (Supercast SW/concrete):** 13.5 N/m.

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**Flash point:** -4°C

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The above data represents typical values and should be considered as a purchase specification.

## Supercast SW Connector

A Supercast SW component, moulded from water swellable elastomeric, designed to connect with Supercast Hydrofoil, Supercast Watafoil, Supercast Rearguard profiles. This connector provides a method of ensuring and maintaining the integrity of a waterstop network, for example, when expansion joint occur.

The connector is push fitted around the outer bulb of the Supercast PVC waterstop. It is then bonded to the concrete and joined to the rest of the Supercast SW10 strip.

## Supercast SW Adaptor

This adaptor has been developed to solve the problem of fixing a waterstop to a diaphragm, or secant piled wall. The Supercast SW Adaptor combines a water swellable material and a PVC profile. It provides a method of continuously jointing Supercast SW10 with Supercast Rearguard 'R' at right angles to each other in the same plane. Such junctions occur between diaphragm or secant piled walls, pile caps and floor slabs.

The use of Supercast SW Adaptor simplifies the forming of these critical junctions. Site welding of the Supercast SW Adaptor to the Supercast PVC, followed by butt jointing to the existing SW 10 strips is all that is necessary. This provides a positive connection between the two systems. It eliminates reliance on site workmanship to make complex junctions with epoxy or cementitious mortars



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#### Important note

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