

SUPERSWELL 47B

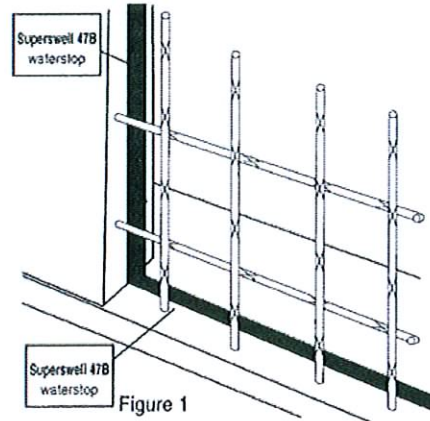
THE FORCE IN WATERSTOP SOLUTIONS

CONTROLLED EXPANSION WATERSTOP

Superswell 47B waterstop is a unique sealing compound which expands in a controlled fashion when exposed to moisture, forming a compression seal in concrete joints.

Superswell 47B waterstop is ideal for use in horizontal and vertical construction joints for cast in-situ concrete structures.

Superswell 47B waterstop is manufactured utilizing a specialised mixing process which encapsulates hydrophilic materials into a rubber base creating a controlled, moisture-activated seal. This product has the structural integrity of a rubber-based sealant, the features of a butyl sealant, as well as the ability to expand to create a **SELF HEALING JOINT MATERIAL**.



Total Days Of Exposure in Portable Water

A = Potable Water	7 Days	118% movement
	14 Days	131% expansion
	28 Days	142% expansion
	56 Days	177% expansion

Note: 100% indicates original size.

WHAT DOES CONTROLLED EXPANSION MEAN?

Unlike many of the traditional clay-based products, Superswell 47B waterstop, being hydrophilic polymer based, will not expand to a point that the hydration process itself leads to the possible "disintegration" of the waterstop.

This can be an important issue when engineers are looking for a seal in vertical construction joints where the joint could open up due to excessive shrinkage in the concrete. In-field experience has proven that products which continually expand, may lose their structural integrity and begin to wash away from the joint when subjected to a constant flow of water.

The material does not expand prematurely, does not absorb water from the fresh concrete poured against it, and helps minimize any pre-expansion if the joint becomes ponded with water.

Superswell 47B waterstop has been tested to withstand a 60 metre head of water pressure and because of its butyl rubber properties it may actually bond to both concrete surfaces, creating a gasket seal when used in conjunction with the Superswell 47B adhesive/primer.

AREAS OF APPLICATION

Typical applications for **Superswell 47B** waterstop include:

- Tunnels • Underground Structures • Pits
- Box Culverts • Retaining Walls
- New to Old Concrete • Manholes
- Poured In-situ Construction Joints
- Basements
- Above & Below Grade Precast Panels

Note: Areas of application should be verified and approved by the consulting engineer who is satisfied with the suitability of the product for its intended use.

SPECIFICATION

Waterstops where shown on the drawings shall be **Superswell 47B** controlled expansion waterstop as supplied by **Bostik**. The waterstop is to have a built-in delay system to minimise any pre-expansion and should only show minimal signs of deterioration or disintegration during and after expansion.

The waterstop is to be placed in accordance with the manufacturers installation guidelines, and design engineers specification.

M S D S

Material Safety Data Sheets are available as required for **Superswell 47B** waterstop and primer/adhesive.

LIMITATIONS

Due to expansive forces, **Superswell 47B** waterstop should be both detailed and installed with a minimum 50mm clear cover to the face of concrete. Expansion rate can vary in salt and contaminated water. Increase cover when using light weight, low strength concrete. Not for use where excessive shrinkage of the concrete may occur at the joint faces.

ADVANTAGES

- Excellent for applications to rough concrete surfaces.
- Limited loss of integrity of waterstop.
- Allows concrete to gain strength before expansion
- For use in horizontal and vertical construction joints.
- Excellent adhesion to **Superswell 47B** primer/adhesive.
- Can be bedded into wet concrete.
- No compaction or displacement problems.
- Unaffected by repeated wet and dry cycles.
- Has the ability to bond to both concrete surfaces.
- No on-site welding required as with PVC waterstops.
- Very easy to handle and install.
- No split forming required.
- Non toxic and requires no special handling.

PACKAGING

Dimensions	25mm x 19mm x 5m rolls (6 rolls per carton)
Primer/Adhesive	1 Litre cans 4 Litres cans
Primer/Adhesive	20 - 30m per 1 Litre can coverage (approx.)

PHYSICAL PROPERTIES

DESCRIPTION	SPEC	RESULT
Colour		Black
Size		25mm x 19mm
Specific Gravity	ASTM D	1.40/1.45
Hydrocarbon Content	ASTM D	47% min.
Volatile Matter	ASTM D	1% max.
Penetration, cone @ 77°F, 150gm; 5 sec	ASTM D 217	40± 5
Head Pressure		Tested to 60m
Application Temperature		-22°—52°C
Service Temperature Range		-34°—82°C