

HYDROPHILIC SWELL BAR

Waterproofing solution for construction cold joints and concrete penetrations

Technical Data Sheet

PRODUCT DESCRIPTION

The FLEXVERSE® hydrophilic swell bar is a type of waterstop that can be used to stop water ingress through cast-in place concrete construction joints and penetrations in concrete.

The profile has a unique hydrophilic structure, which has been engineered to swell on contact with water, and exert pressure against the ingress inside the structure. This forms an effective sealing system that can bar water entering even through the most microscopic cracks and penetrations.

The FLEXVERSE® swell bar is versatile water-tight seal that can be used in many situations, including but not limited to:

- Construction joints, including those in cable ducts
- Pipe, steel and pile cap penetrations through walls and base slabs
- All types of penetrations around concrete

CHARACTERISTICS AND ADVANTAGES

Clients enjoy multiple benefits from using FLEXVERSE® swell bars on their sites, owing to several advantageous features of our swell bars:

- Reversible swelling chemistry tailored for multiple-cycle use
- Tested for long-term reliability
- Easy installation on various substrates
- No welding or hardening time required
- Resistant to several chemicals
- Adaptable to many different detailing tasks
- Can be used in conjunction with other waterproofing systems
- Non-toxic and environment-friendly
- Highly economical

TECHNICAL SPECIFICATIONS

Minimum volumetric expansion (in percentage)

Testing method follows IS 3400 (Pt-6):2012 / ASTM D417

Liquid	Time elapsed since immersion	Bentonite swell bar	Polymer swell bar	Saline swell bar
Potable water	24 hours	100	100	100
	7 days	300	250	600
Saline solution	14 days	-	-	100

Note: We can also manufacture as per other client specifications or requirements.
Above specifications are subject to change due to continuous R&D.



DIMENSIONS

FLEXVERSE® Bentonite swell bars	FLEXVERSE® Polymer swell bars	FLEXVERSE® Saline swell bars	Width (mm)	Height (mm)	Packaging (quantity per carton)
FVB-401	FVP-501	FVS-1001	20	25	50 metres (10m x 5 coils)
FVB-402	FVP-502	FVS-1002	20	10	100 metres (20m x 5 coils)
FVB-403	FVP-503	FVS-1003	20	5	150 metres (25m x 6 coils)
FVB-404	FVP-504	FVS-1004	20	20	75 metres (15m x 5 coils)
FVB-405	FVP-505	FVS-1005	20	6	150 metres (25m x 6 coils)
FVB-406	FVP-506	FVS-1006	25	10	80 metres (20m x 4 coils)
FVB-407	FVP-507	FVS-1007	15	10	120 metres (20m x 6 coils)
FVB-408	FVP-508	FVS-1008	25	15	60 metres (15m x 4 coils)
FVB-409	FVP-509	FVS-1009	25	25	50 metres (10m x 5 coils)

Note: The swell bars can be customised in various colours, as well as other dimensions/packaging.

STORAGE AND INSTALLATION GUIDE

Storage: store FLEXVERSE® swell bars unopened in original packaging, in a cool, dry, well-ventilated place. Shelf life: ~24 months if properly stored.

Surface preparation: keep application surface clean, dry, and free from grease, dirt and debris. Roughened surfaces are preferred for better gripping.

Application: Secure the swell bar horizontally or vertically on the joint, leaving at least 3inch concrete coverage on all sides for safe expansion. Maintain continuous surface contact using suitable adhesives or mechanical fasteners, to prevent displacement and maximise sealing.

Completing installation: Concreting should follow promptly. Vibrate concrete systematically to obtain impermeable, void-free concrete, and maximum contact with bar. If there is a delay in concreting, cover bars to protect from premature swelling due to moisture/rain.

Resolving premature swelling: If the bars swell before concreting, remove and store affected bars in a dry place, until they shrink back to ~80–90% of original size. These can then be reused. We recommend using a fresh lot meanwhile, to prevent delays on-site.

