

Description:

TechnoFlex® Aquastop is a range of centrally placed and externally placed PVC Waterstops extruded from high grade PVC compound, which whilst flexible is easily welded on site to provide the primary seal in the waterproofing of water retaining and/or water excluding structures. Hydrostatic pressure resistance in accordance with guidelines of ASTM D 5385-93. UV resistance in accordance with ASTM G 154-16.

Typical applications include

TechnoFlex® Aquastop range of PVC waterstops is designed to provide an integral sealing system for movement and construction joints in concrete cast in-situ. These joints typically occur in the following types of structure:

Water retaining

- Reservoirs, water towers and sewage tanks
- Dams, culverts, canals and spillways
- Swimming pools
- Bunded areas surrounding liquid retaining tanks

Water excluding

- Basements and underground car parks
- Tunnels and subways
- Abutments and retaining walls
- Roof decks and podium areas

Features and Benefits

- Complete range of profiles and sizes to suit all construction requirements.
- Reinforced eyeleted fixing flanges on centrally placed profiles for positive location in joints prevents collapse of profile during concrete placing.
- Simple on-site butt welding.
- Four valve sealing system on all profiles.
- Premoulded intersection/ junction pieces available.

Method of Application

Surface preparation

Ensure the substrate is structurally sound, free of surface laitance, oils, grease, dirt, moss, lichen, and loose material. The surface should be smooth and free from sharp projections and loose debris, and any material which would hinder adhesion. Brush down and clean off, leaving a sound substrate providing adequate bond for the applied slurry.

Preparation is usually carried out using mechanical tools such as scabblers for floors and bush hammers for vertical surfaces. Static cracks greater in width than 1mm must be chased out, dampened down and repaired with a dry pack consistency of TechnoCem™ RM. Prior to priming use TechnoCem™ RM to achieve a smooth and level surface by filling holes and irregularities.

Technical Properties	
Form:	Extruded PVC
Solids content:	100%
Colour:	Blue
Tensile strength:	15 N/mm ² Minimum
Elongation at break:	350% Minimum
Shore 'A' Hardness:	75- 80
Toxicity in potable water:	None
IEJ/ EEJ Extension:	15 mm
IEJ/ EEJ Transverse Shear:	25 mm
ICJ/ ECJ Extension:	6 mm
Alkali resistance:	Pass
Hydrocarbon resistance:	Pass
All values are subject to 5-10 % tolerance	

Standards

- ASTM D 638 : 91 (Tensile/ Elongation)
- US Corps of Engineers CRD-C572-74 (Alkali Resistance)
- BS 6920 (Toxicity)
- Instron Tensometer (Extension/ Transverse Shear)

Profiles

Centrally placed TechnoFlex® Aquastop profiles provide a barrier across all joints in-situ concrete structures by casting the section centrally into the edges of adjacent concrete components. Used in most water retaining and water excluding structures, they are capable of withstanding water pressure from either the internal or external face.

TechnoFlex® Aquastop IEJ (Internal Expansion Joints):

Expansion bulb sections principally for expansion joints but can be used for construction/ contraction joints. With reinforced eyeleted fixing flanges for wiring the waterstop to surrounding rebar.

TechnoFlex® Aquastop ICJ (Internal Construction/ Contraction Joints):

Plain web sections for construction/ contraction joints, also with reinforced eyeleted flanges and grout check fins to prevent grout loss from formwork.

Externally placed TechnoFlex® Aquastop profiles are principally designed for basement, foundation and floor slab applications in both vertical and horizontal joints. Each externally placed section incorporates a reinforced railing flange for fixing to the formwork or blinding concrete. The four valves allow good concrete compaction and very secure anchorage into the concrete.

TechnoFlex® Aquastop EEJ (External Expansion Joints):

Sections have a flat top, wedged expansion box for positive anchorage and good seating of joint fillers. EEJ sections can also be used in construction/ contraction joints. The bottom web in the expansion box is thinned to cater for excessive subsidence or seismic movement should it occur.

Priming

Apply a coat of TechnoSeal® PrimePlus for sealing pin holes and better bonding of TechnoFlex®PLM 5000

Coating Application

TechnoFlex®PLM 5000 is a cold applied and ready to use material, it does not need to dilution. It can be applied with brush, roller, airless pump or trowel. Depending on weather conditions, it dries in approximately 5-6 hours.

Coverage

Approx. 1.65 kg/m² for 1.5mm thickness layer.

Packing

20 Kg Pack

Storage

TechnoFlex®PLM 5000 has a shelf life of 12months if unopened containers stored in cool dry place.

Cleanup Information

Clean tools and equipment with water immediately after use. Dried material can only be removed with industrial type solvents or mechanically.

Cautions / Limitations

- It may be harmful with skin contact.
- Do not apply in freezing conditions or during precipitation.
- Protect applied materials from rain, freezing, foot traffic and continuous high humidity until completely dry.
- Do not use when air and surface temperatures are below +5°C and above +40°C.

Additional information

Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

*Separate datasheet are available on these products.

TechnoFlex® Aquastop ECJ (External Construction / Contraction Joints): Sections are plain web incorporating grout check fins to prevent grout loss at formwork.

Special Profiles

TechnoFlex® Aquastop 200M ICJ/E is an economic construction/contraction joint profile specifically for use in kicker and contraction joints in small structures such as water tanks cast in situ manholes, channels etc where there are no expansion joints and wall or slab thicknesses do not exceed 200mm.Includes an eyeleted flange.

TechnoFlex® Aquastop 250 ICJ/X & 250IEJ/X are 10mm thick web profiles for applications where there is high water pressure or head of water in excess of 70meters. Both profiles include reinforced eyeleted fixing flanges and are compatible with 250 ECJ/ EEJ profiles in an integral network.

Waterstop Selection

TechnoFlex® Aquastop PVC Waterstops are designed for use within the performance parameters indicated under the headings Technical Data and Typical Properties.

Centrally placed profiles (ICJ & IEJ) are usually located midway in the slab or wall thickness across the joints in concrete structures. They will equally prevent the passage of water through the joint from either face. They are particularly suited to water retaining structures and in walls and slabs where pressure differential may occur such as in reservoir walls. They are equally appropriate for joints in suspended slabs, vertical wall joints and lift joints.

Externally placed profiles (ECJ & EEJ) are of particular advantage for their ease of installation in basement and foundation applications in situations where they are firmly supported against back pressure, i.e. in water retaining structures (base slab) where they are placed on the blinding concrete.

Size of waterstop

The choice of width of profile is mainly governed by slab/ wall thickness, position of reinforcing steel and aggregate size. As a general rule, the 250mm width profiles are appropriate for slab/ wall thickness over 250mm, allowing good compaction and width of barrier to water penetration. For concrete members less than 250 mm the use of a smaller profile approximating to the actual slab or wall thickness will be appropriate.

Installation

TechnoFlex® Aquastop ICJ & IEJ profiles must be installed so they are securely held in the correct position whilst the concrete is poured. The concrete must be fully and properly compacted around the waterstops (the use of FlowMax®PC 900 admixtures to produce self-compacting concrete is of great advantage to avoid voids or porous areas after concrete placing). Where reinforcement is present, an adequate clearance must be left between this and all waterstops to permit proper compaction of the concrete.

The eyelets in the reinforced flanges of the ICJ and IEJ profiles allow them to be wired to the surrounding reinforcing steel. The eyelets are an integral part of the profiles and being placed outside the outer valves cannot create a water path around the profile or impair the efficiency in performance in any way.

STERLING TECHNOTRADE INDIA PRIVATE LIMITED

The Specialist Construction Chemical Company®

Head Office: 109-111-112, 1st Floor, Vijaya Building, No. 17, Barakhamba Road, Connaught Place, New Delhi- 110001

Manufacturing Unit: Plot No-J-3, UPSIDC Site C, Surajpur Industrial Area, Greater Noida, Uttar Pradesh 201306

WEB: sterlingtechnotrade.com | **EMAIL:** support@sterlingtechnotrade.com | **TEL:** 01145084212

Health and Safety instructions

Cause eye and skin irritation. If eye or skin contact, get immediate medical attention. If swallowed, do not induce vomiting. Call a physician or poison control center. Never give anything by mouth to an unconscious person. Wash hands thoroughly after handling. Wear protective clothing, gloves & eye and face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Dispose of unused, contents, container and other contaminated wastes in accordance with local, state, federal and provincial regulations. Keep container closed when not in use. Keep out of the reach of children.

Please contact with Sterling Technotrade's technical service department for further information and support.

Product only for professional use.

DISCLAIMER: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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Please note that this datasheet supersedes all previous versions.

TechnoFlex® Aquastop ECJ & EEJ profiles when used on ground slab blinding concrete where a permanent, firm and stable support is given usually require no fixing. The profile is simply laid centrally over the line of the joint to be formed. Fixing to vertical shuttering is simplified by nailing with double headed nails through the outer reinforced flange to provide a firm fixing

Equipment

Heat welding equipment is available to enable site jointing to be carried out efficiently. Jointing jigs ensure that the mating surfaces of the waterstop are accurately aligned while the heater blade heats the waterstop to the necessary temperature for jointing.

Site Jointing Instructions

Reliable jointing of TechnoFlex® Aquastop waterstops can be carried out rapidly onsite with TechnoFlex® Aquastop heat welding equipment. Complete welding kits, comprising simple jigs and electric blades, are available and provide all that is needed to make tough joints between all PVC waterstop sections, Note that when ordering TechnoFlex® Aquastop equipment, both the type and width of waterstop must be stated.

Heat welding of TechnoFlex® Aquastop: Make sure that the heater blade is clean, plug it into the correct voltage electricity supply and leave in a safe position to warm up. Ensure that the ends of the waterstop to be jointed are of the same width and profile; clean them with water or CLEANING SOLVENT NO. 2 and dry them.

Clamp them in the correct profile slots of the jig provided and cut both ends off square with a sharp knife, flush with the faces of the jig.

Note: An allowance must be made for waste and for the 5 to 10mm that will be taken up by melting when calculating the length of waterstop required. Loosen the jig and slide them back so that approximately 10mm of each waterstop end projects and then clamp the jig tightly in position.

Position the heater blade on the bars between the jigs and slide them together until the waterstop ends are pressed firmly against the sides of the blade. The PVC should melt without burning or charring. Hold the jig firmly in position until a bead of molten PVC approximately 3mm in diameter appears along either side of the heater blade.

Slide the jig apart a little and remove the heater blade with an upward movement. This will ensure that it takes as little PVC as possible with it. Quickly joint the molten ends by sliding the jig together and exerting pressure. Approximately 20 seconds to allow the molten PVC to fuse completely. Switch off the heater blade. While it is still hot, clean thoroughly with emery paper or a wire brush ready for the next joint. Unclamp the jig and carefully remove the waterstop. Do not flex the joint until it has cooled. The joint is now complete. When cold, test it by flexing the waterstop several times.

Intersection Pieces

Standard factory produced welded and moulded intersections are available for all TechnoFlex® Aquastop profiles as detailed below.

Intersections for IEJ/ICJ profiles

These are required when a change from horizontal to vertical occurs in the same type of joint i.e. from slab expansion to wall expansion joint or slab contraction to wall contraction joint off one of the horizontal legs.