TAT YIN (HK) CO., LTD.

TECHNICAL DATA

TYL®- Waterguard PVC

Centrally and Externally placed PVC Waterstop

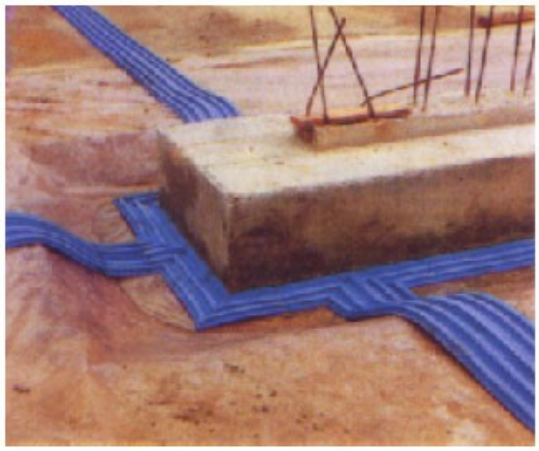
202402

DESCRIPTION

TYL®-Waterguard PVC are extruded from a high-grade polyvinylchloride (PVC) compound which has been formulated to give excellent flexible and durability. They used in concrete for the salivary the construction and expansion joints, are embedded in concrete, across and along the joint, to form a continuous water-light diaphragm that prevents the passage of fluid through the joint. They are available as straight lengths and factory produced intersections or as a factory prefabricated segment of a network to minimize site jointing.

USES

- Water retaining structures
- Reservoirs, water towers and dams
- Spillways, canals, swimming pools, sewage tanks
- Basements and underground car parks
- Tunnels and subways retaining walls
- Foundation structures



Advantage

- Easy to install on site.
- Easy to weld on site.
- Full range of moulded and fabricated intersection pieces.
- Suitable for use in potable water structures.
- Flexible to accommodate movement during construction and service life.
- High quality PVC for long durability.
- Many different types and sizes available.
- Fully continuous 4 bulb network.
- Reinforced eyeleted edge flanges for positive fixing

Specification Compliance

- CEDD GS 16.80 and Table 16.12

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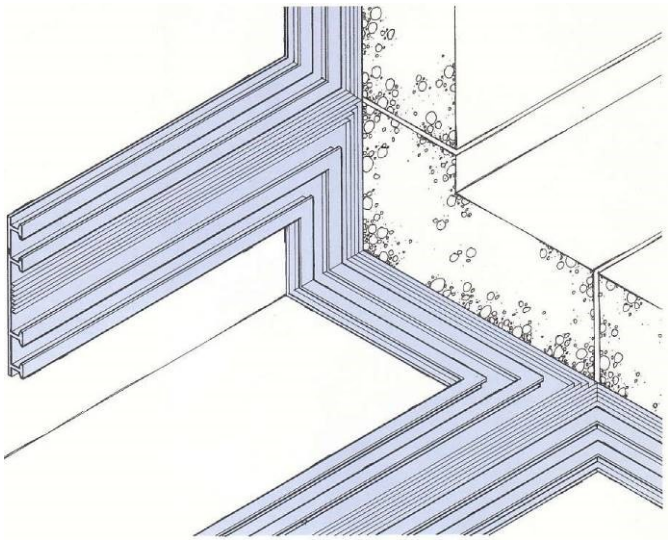
Profiles

Type	Polyvinyl Chloride
Color	Blue
Width	150mm, 200mm, 250mm, 330mm
Thickness	5mm
Packing	15m pre roll
Water Pressure Head	At Least 55m for 250mm width model
Joint Movement	Up to 16mm

Physical & Mechanical Properties

Property	Test Method	Test Result
Density	BS EN ISO 1183-1	1354 kg/m^3
Hardness	BS2782:Part 3:Method 365A & BS903-A26	72.2 IRHD
Hardness	BS2782:Part 3:Method 365D	5.36 N/mm^2
Shore D Hardness	ASTM D2240-05	39.1
Shore A Hardness	ASTM D2240	78
Tensile Strength	BS2782:Part 3:Method 320A to 320F	16.2 N/mm^2
Elongation at Break Point	BS2782:Part 3:Method 320A to 320F	312%
Water Absorption	B BS2782:Part 4:Method 430A to 430D	0.08%
Water Absorption	BSEN ISO 62	0.06%
Softness number	BS2782:Part 3:Method 365A & BS903-A26	44



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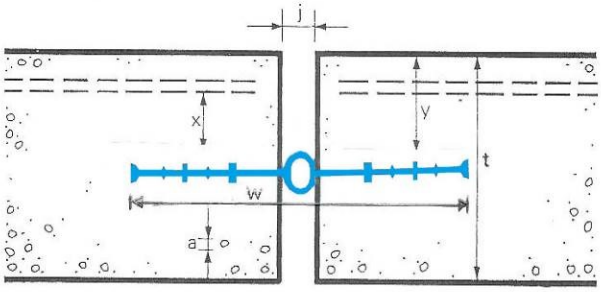
Design Criteria

The Choice of the width and thickness of TYL®-Waterguard PVC is largely governed by concrete thickness, the position of the reinforcement, aggregate size and complexity of the pour



1 w not greater than t
2 w not less than 6a + j
3 y not less than ½(w – j)
4 x not less than 2a

a = largest size of aggregate

Centrally Placed Waterstop

Sections cast in slabs or walls in concrete structure can prevent water seepage. They fit to water retaining structures and in walls and slabs where pressure differentials may occur. They also fit to joints in suspended slabs, ground floor slabs, vertical wall joints need lift joints.

Externally Placed Waterstop

It fits to basement and foundation construction where it supports firmly against back pressure, such as in or beneath water excluding structures where it is firmly supported by the base formation

Waterguard PVC Profiles

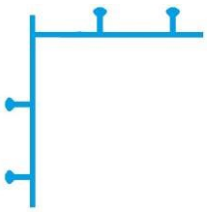
Model: **C330** (Width:330mm)
C250 (Width:250mm)
C200 (Width:200mm)
C150 (Width:150mm)
Centrally placed waterstop for expansion joint

Model: **W330** (Width:330mm)
W250 (Width:250mm)
W200 (Width:200mm)
W150 (Width:150mm)
Centrally placed waterstop for construction joint

Model: **KC330** (Width:330mm)
KC250 (Width:250mm)
KC200 (Width:200mm)
Externally placed waterstop for expansion joint

Model: **KW330** (Width:330mm)
KW250 (Width:250mm)
KW200 (Width:200mm)
KW150 (Width:150mm)
Externally placed waterstop for construction joint

Model: **KW250 Angleguard**
Externally placed waterstop for construction joint



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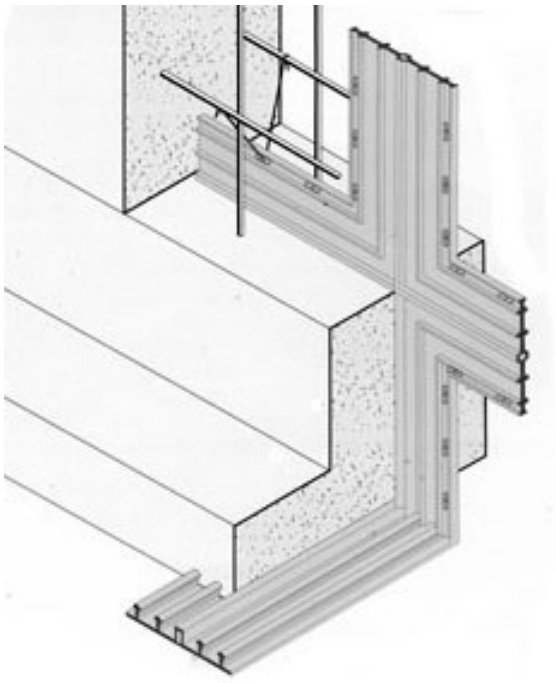
Installation Method of PVC Waterstop

Centrally placed PVC Waterstops

The waterstops are to be installed so that they are securely held in their correct position whilst the concrete is placed. The concrete must be fully and properly compacted around the waterstops to ensure that no voids or porous areas remain. Where reinforcement present, adequate clearances are to be left between this and all waterstops to permit proper compaction of the concrete. No holes are to be made through any waterstop except where provided for in externally placed PVC waterstops.

With Eyeleted waterstop sections the simplest and firmest fixing is assured. The metal eyelets incorporated at regular intervals along the outer flanges of the centrally placed PVC waterstop sections enable them to be wired quickly and simply to surrounding reinforcement. Thus, the waterstop is positioned and positively fixed throughout the concreting process. The eyelets themselves are an integral part of the waterstop and, being placed outside the edge bulbs, cannot create water paths around the section or impair its efficiency in any other way.

Illustrations of eyelets centrally placed PVC waterstops showing eyeleted flanges wired to reinforcement are shown below.



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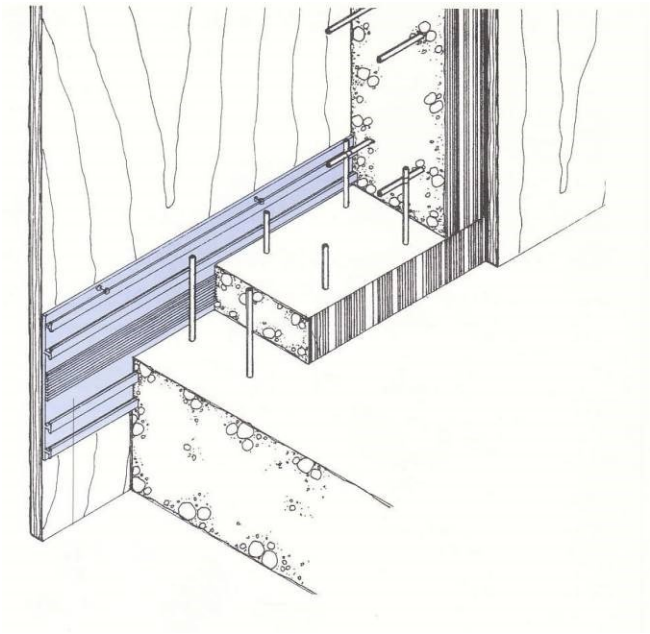
Externally placed PVC Waterstop

When used on ground slabs where permanent firm and stable support is afforded by a previously laid concrete blinding, the externally placed PVC waterstop profiles need no fixing. It is simply laid centrally over the line of the joint to be formed. Fixing to vertical shuttering at regular intervals along both edges. These take any ordinary galvanize round wire nails or typical steel nails with 40mm long to provide a firm fixing capable of withstanding any concrete pour. Longer nails are not re-commended. Nails can be pre-positioned along a complete length of waterstop and will be held in position, making fixing a single-handed job. And, as the nails are sent in straight, the stripping of formwork is simplified.



Externally placed PVC Waterstop in a partial contraction joint.

Heater Blade

Jointing of TYL®-Waterguard PVC is carried out using Heat Welding Equipment. The ends to be joined are cut square and held in alignment in a special jig. The ends are then pressed either side of a special heated blade, until an even, molten bead of PVC appears around the section. The heated blade is then removed and the molten ends pressed fully together. The PVC cools to form a strong fusion welded joint.

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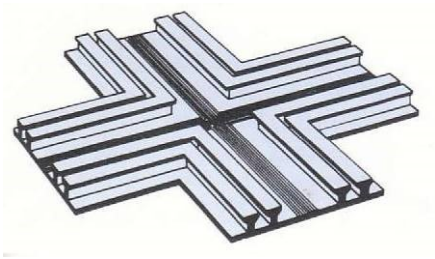
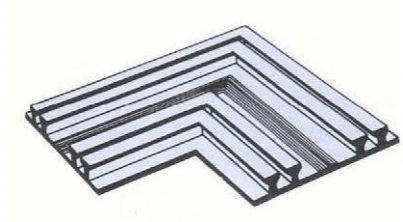
Intersection Pieces

TYL®-Waterguard PVC allows an easy on-site welding, including the prefabrication of cross, T, L and corner pieces.

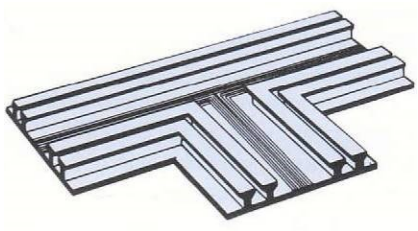
L-Vertical



X-Flat



L-Flat



T-Flat

Heater Blade

110V and 220V blade are available

Jointing Jigs

All profiles have jointing jigs

Storage

Store in original unopened packing, in cool dry conditions away from sunlight

Health and Safety

Hot weld site jointing of PVC waterstops liberates hydrogen chloride mist and vapour. Ensure adequate ventilation. If working in still air or confined spaces, provide forced ventilation or suitable respiratory protective equipment.

Please enquire about our range of construction product

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