

# HYDROJOINT PVC

## Flexible PVC Waterstop

### Description:

HYDROJOINT PVC waterstop is composed of high grade quality, plasticized Poly Vinyl Chloride compound, which has been formulated to give excellent flexibility and durability to provide extra-long life performance in concrete structures against water leakages. It is specially designed to serve as an integral sealing system for construction, contraction and expansion joints in areas where water retention is required. HYDROJOINT PVC is manufactured to meet the most stringent performance specifications and is highly resistant to chemicals.

### Applications:

HYDROJOINT PVC is applied as a water stop network, embedded into the reinforced concrete structures, to prevent ingress of moisture by acting like a continuous water-tight diaphragm. Accordingly, a properly designed water stop system accommodates the dimensional changes at expansion and contraction joints for typical concrete structure. Therefore, it will provide an effective and thorough means of waterproofing for reservoirs, water towers and sewage tanks, dams, culverts, canals, spillways, swimming pools, basements, underground car parks, tunnels, subways, retaining walls, roof decks, etc.

### Advantages:

- Manufactured using high-grade virgin PVC compound.
- High flexibility at adverse conditions for long time.
- Reinforced eyeletted edge flanges for positive fixing.
- Simple on-site jointing.
- Full range of moulded and fabricated intersection pieces.
- Suitable for use in contact with potable water.
- High endurance for extreme water pressure.
- Continuous Four bulb sealing system on all profiles.
- Exceptionally flexible even if exposed at adverse environmental condition.
- High tensile strength and elongation ability.
- Can be used in hot as well as cold climates.

### Instructions for Use:

#### DESIGN CRITERIA:

Waterstop width is largely governed by concrete thickness, and the position of the reinforcement. In general the 250 mm width of waterstop is suited to wall thicknesses of 250 mm and over. For concrete less than 250 mm thick, the use of a narrower waterstop (approximating to the wall thickness) will be appropriate. HYDROJOINT PVC waterstops are available as straight lengths and factory produced intersections to minimize site jointing. The range consists of:

#### Centrally placed waterstop:

These waterstops are positioned and supported by concrete on both side within the thickness of the concrete components. Therefore, they are able to withstand water pressure from either side, which makes them suitable for use in water retaining structures such as water tanks.

#### Externally placed waterstop:

These waterstops are designed for use in basement, foundation and floor slab construction in vertical and horizontal joints. When fixed externally to retaining walls, or below basement floor slabs, it will resist the underground water pressure from the soil side.

#### Junction Pieces:

A wide range of standard jointing pieces are available. All have a 30cm free wing to allow an easy butt welding at site. For non-standard sections, drawings are to be provided with the necessary details.

#### Type of Joints:

- Flat Cross Type
- Flat 3-Way Type
- 90° Flat angle
- 90° Edge Angle
- 90° Vertical T-Piece
- 90° vertical Cross Type

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## Application:

### Central Fixing:

Internal joint profiles should be positioned within the concrete. The water stop is put in place by specifically prepared split stop end form work. It is then securely tied with wires through the brass eyelets provided at the end of flanges to the adjacent reinforcement bars so that they do not bend under the pressure of the concrete while pouring it.

### External Fixing:

The external joint profile is usually loosely laid on to the blinding. The stop end formworks are then fixed on the top of the water stop. The water stops have to be nailed into position to avoid displacements while stripping the shutters. Bend the nail's head to hold the waterstop in position. Clean the joint surface properly prior to pouring the next part of the concrete slab. Compact the poured concrete around the waterstop profile to prevent voids formation.

### Welding:

In order to ensure an effective watertight system, a fully continuous waterstop network must be formed throughout. At bends and cross sections, factory welded junctions are to be used when jointing with the placed waterstops. Field butt splices shall be heat fused using Teflon coated thermostatically controlled welding iron. The edge of the waterstop shall be cut with a knife to get an even and sharp finish and aligned in a specifically designed fixing jig. The edges will then be positioned in the jig in such a fashion that at least 25mm of the water stop protrudes from the jig. Place the welding knife in between the two ends, and when the PVC starts melting, beads will start forming around the section. Remove the welding knife and press both the ends firmly against each other for some time till the PVC cools and forms a strong fusion weld.

## Standards:

HYDROJOINT PVC confirms to:

- BS 2782, BS 6920, BS 2571
- ASTM D638, ASTM D412, ASTM 570
- ISO 62

## TECHNICAL PROPERTIES

Color	:	Blue
Profiles	:	Extruded thermoplastic sections
Hydrostatic head 250mm profile	:	Up to 100 m
Joint movement	:	Up to 10 mm
Compound Typical Figures	:	To BS 2782 at 25°C
Tensile strength	:	14 N/mm <sup>2</sup>
Elongation at break	:	300%

PROPERTIES	UNIT	VALUE
Specific Gravity		1.37±0.2
Hardness	Shore A	80±5
Ultimate Elongation	%	300%
Brittleness Temp.	°C	-25
Water Absorption	%	Negligible 0.06
Tensile Strength	N/mm <sup>2</sup>	14
Effect of alkalis after 7 days		None
Water Potability		Suitable for use with potable water sources

## Storage:

Store properly in a cool and shaded area (at temperatures of +25°C) and in unopened and dry conditions, and away from sharp edges to prevent damages.

## Packaging:

HYDROJOINT PVC is supplied in 15 LM roll. Connections are supplied by piece.

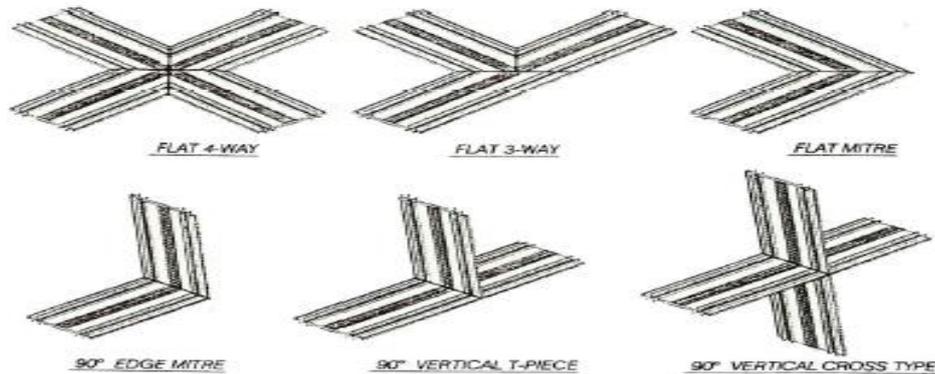
## Shelf Life:

HYDROJOINT PVC can be utilized within 5 years of production date if stored in proper conditions as recommended.

## Remarks:

HYDROJOINT PVC should never be used in cases of negative pressure surfaces.

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<p>Internal Construction : IC</p>	<p>External Construction : EC</p>
<p>Internal Expansion : IE</p>	<p>External Expansion: EE</p>

## STANDARD SIZES

Internal Construction : IC	IC-200	IC-250
External Construction : EC	EC-200	EC-250
Internal Expansion : IE	IE-200	IE-250
External Expansion: EE	EE-200	EE-250
Internal Construction : IC	IC-350	IC-350
External Construction : EC	EC-350	EC-350
Internal Expansion : IE	IE-350	IE350
External Expansion: EE	EE-350	EE-350

\*Size 300 E or C upon request.

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This technical data sheet is not considered as local building codes. It shall be used as general reference for the product, based on our current knowledge and experience. However the company do not accept any liability arising from the use of its products as it has no direct control on how and where the product is applied.

