

## Corrostop PVC

### PVC water stops for construction & expansion joints in concrete

Reference No.	TDS / WS / CSTPVC
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#### Product Features

The **Corrostop PVC** plasticized water stop range are extruded high grade PVC profiles designed to be cast into construction or expansion joints to prevent the passage of liquids under pressure. They work by creating a tortuous path with their profile, making it harder for liquids to travel across the joint and penetrate into the structure.

Additionally the shape of the bulbs along the profiles act like valves particularly during drying shrinkage, thus forming a tight seal that prevents the passage of liquids.

**Corrostop PVC** water stops are available in various widths and profiles, and are selected according to the type of structure and application they are to be used in.

**Corrostop CJC** - centrally placed waterstop for construction joints only

**Corrostop CJE** - centrally placed waterstop for expansion joints

**Corrostop RJC** - externally placed waterstop for construction joints only

**Corrostop RJE** - externally placed waterstop for expansion joints

Complies to BS 2571 and CRD - C 572 - 74.

#### Typical Uses

**Corrostop PVC** is typically used on below ground, water retaining or water excluding structures such as basements, tunnels, culverts, manholes, pumping stations etc.

A guideline to the choice of profile and width to be used is given as follows:

The general rule of thumb is that for wall or slab thicknesses of 250 mm & above use a 250 mm wide waterstop profile. For widths less than 250 mm, use either 150 mm or 200 mm profiles to match as near as possible the thickness of the wall or slab.

External waterstops are generally used when there is positive water pressure directly on the waterstop, particularly in water excluding structures such as basements, tunnels etc. But are also used in base slabs in water retaining structures.

Centrally placed waterstops are always used in wall joints in water retaining structures, and can also be used in roof & podium deck joints or wall joints in water excluding structures.

#### Technical Data

Properties	Test Standards	Typical Values
<b>Specific gravity</b>	ASTM D 792	: 1.38
<b>Service temperature</b>		: - 50°C to 80°C
<b>Shore A hardness</b>	ASTM D 2240	: 70 - 90
<b>Tensile strength</b>	ASTM D 2628-91	: > 15 N/mm <sup>2</sup>
<b>Ultimate elongation, at break</b>	ASTM D 2628-91	: ≥ 300%
<b>Tear resistance</b>	ASTM D 624-00	: > 40 kN/m
<b>BS Softness</b>	BS 2782-3	: 40 - 50
<b>Water absorption</b>	ASTM D 570	: < 0.2%
<b>Recommended water head pressure</b>	ASTM D 5385	: > 50 meters *The actual ability to resist head pressure depends on quality of concrete, its placement and how water stop is installed

Note: All values given are subject to 5 - 10% tolerance.

#### Directions for Use

##### Preparation

Long term durability and function can only be achieved with good preparation & application to give a continuous waterstop network throughout the structure.

Ensure the surfaces where the PVC waterstop is to be placed are clean and free from sharp projections.

Unroll the waterstop along the line of the joint & cut to length allowing for appropriate intersections as required.

##### Site jointing instructions

PVC waterstop rolls and intersections **MUST BE HOT WELDED TOGETHER** using a suitable jig and electric heating blade prior to placement.

Ensure the ends of pieces to be welded together are square to each other and clamp in the jig. Place the heating blade in between the PVC ends and close the jig together so the ends touch the blade.

Turn on the blade and allow it to melt the PVC either side. Once the PVC is molten on both sides, remove the blade and slide the jig together to meld the molten ends of the PVC. Ensure full contact is made with no gaps or holes.

Allow the PVC to cool down before placing in the structure.

Different jigs should be used depending on the profile and width of waterstop used.

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### *Priming*

No priming is required for this product.

### *Mixing*

No mixing is required for this product.

### *Application*

All waterstops must be securely fixed to avoid moving during concrete placement. Failure to achieve this will result in misaligned or non-active waterstops.

We recommend welding intersections to straight lengths prior to fixing on site.

#### *Externally placed waterstops*

On blinding, unroll **Corrostop RJC** or **Corrostop RJE PVC** waterstops, place centrally along the line of the joint and fix in place using the weight of the formwork that creates the joint.

We recommend welding intersections to straight lengths prior to fixing on site.

On formwork, unroll **Corrostop RJC** or **Corrostop RJE PVC** waterstops, place centrally along the line of the joint, and fix in place by nailing the waterstop through the outer reinforced web to the formwork along its length.

**DO NOT UNDER ANY CIRCUMSTANCES FIX THE WATERSTOP BY NAILING BETWEEN THE LONGITUDINAL RIBS.**

To create expansion joints, cast one side of the concrete first, then securely fix **Corrocell** polyethylene joint filler to the concrete face on top of the PVC waterstop centre bulb for the full depth of the joint, before casting the next piece of concrete directly against the **Corrocell**.

#### *Centrally placed waterstops*

For all applications, unroll **Corrostop CJC** or **Corrostop CJE PVC** waterstop along the line of the joint, and fix in place using wire tied to the steel reinforcement through the reinforced eyelets, along the length of the waterstop roll.

The formwork should be securely erected either side of waterstop so as clamp it in the middle of where the concrete will be poured.

To create expansion joints, cast one side of the concrete first, then securely fix **Corrocell** polyethylene joint filler to the concrete faces either side of the PVC waterstop centre bulb for the full depth of the joint, before casting the next piece of concrete directly against the **Corrocell**.

### *All waterstops*

Ensure the integrity of all welds prior to pouring concrete.

The new CONCRETE MUST BE FULLY COMPACTED AROUND THE WATERSTOPS to ensure no voids or honeycombs. Care should also be taken not to touch the waterstops when using vibrating poker.

### Hot weather conditions

For application above 40°C we recommend adopting the following guidelines:

There are no special guidelines for the application of these materials above 40°C, however we recommend limiting exposure to direct sunlight as much as possible.

### Cleaning

Clean welding tools and equipment immediately after use to ensure consistent joints.

### Limitations

Substrate temperatures should be above 5°C and rising.

Avoid application if the work area may be subject to the onset of rain or moving water.

Only carry out joint welding in well ventilated areas, ensuring the heating blades are fully earthed before use.

If the above general application details do not meet with your requirements, please contact Corrotech for a project specific method statement.

### Estimating

**Corrostop PVC** waterstop roll pack size: 15 LM roll. Available in 150, 200, 250 and 300 mm width in all profiles.

**Corrostop PVC** waterstop intersections pack size: per piece. Standard leg lengths for on-flat intersections are 230 mm from centre, and 75 mm from centre for on-edge intersections.

**Corrostop PVC** waterstop jointing jig pack size: per piece – available in 150, 200 & 250 mm widths for external and centrally placed profiles.

**Corrostop PVC** waterstop welding blade pack size: per piece – 220 V, 22 inches long.

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### Health & Safety

Always use appropriate PPE including gloves, goggles and a barrier cream to avoid contact with skin and eyes.

Avoid inhalation of vapour from welding and ensure adequate ventilation or suitable respiratory equipment if working in confined spaces.

Do not expose products to fire or naked flames under any circumstances.

Always refer to the product Material Safety Data Sheet for full health & safety and handling recommendations.

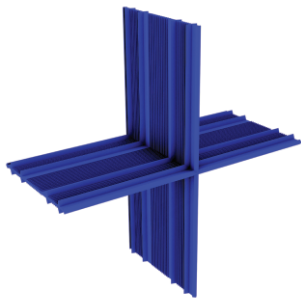
### Storage

Corrostop PVC waterstop has a shelf life of 36 months from the date of manufacture.

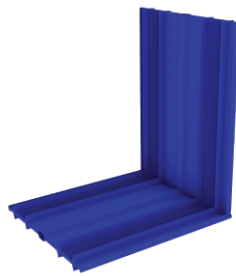
To maximize shelf life always store products in their original, unopened packaging in a dry environment, away from direct sunlight with a minimum temperature of 10°C but not exceeding 35°C.

Damaged packaging, high humidity or extreme temperatures may reduce the shelf life.

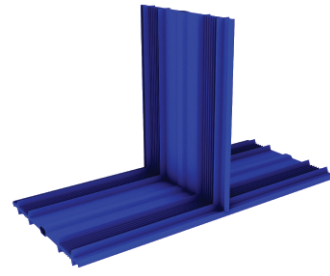
## Prefabricated factory welded joints



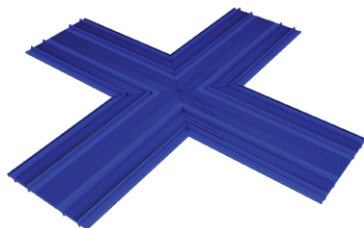
90° VERTICAL CROSS



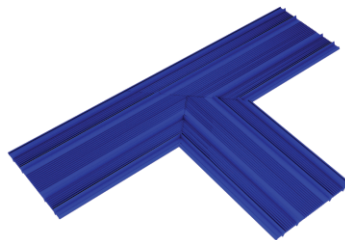
90° EDGE MITRE



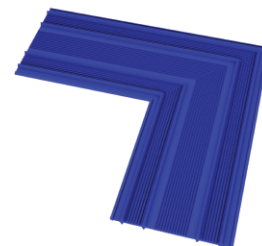
VERTICAL - TPIECE



FLAT - 4 WAY



FLAT - 3 WAY



FLAT - MITRE

Other intersections or pieces can be prefabricated if required to suite specific project requirements. Please contact our Customer Service Department on +971 (0)4 8112100 to discuss further.