

Idrostop PVC BI Idrostop PVC BE

PVC waterstop for sealing structural joints



WHERE TO USE

For waterproofing structural joints in civil, industrial and hydraulic constructions.

Some typical application examples

Waterstops are used to make water-tight structural joints in underground reinforced concrete constructions to avoid ingress from the water table and in reinforced concrete structures used to contain water, such as swimming pools, water tanks and dams.

TECHNICAL CHARACTERISTICS

Idrostop PVC is a highly flexible waterstop made from high-quality thermo-plastic vinyl resins, which form a product with good resistance to mechanical stresses, the aggressive action of chemical products in alkaline environments, sea-water and acids.

Idrostop PVC is used within concrete structures exposed to temperatures from -30°C to $+70^{\circ}\text{C}$ and is highly resistant to perishing caused by sunlight, ozone and other aggressive agents present in the atmosphere and water table.

The dimensions and type of **Idrostop PVC** used for each application generally depends on the following parameters:

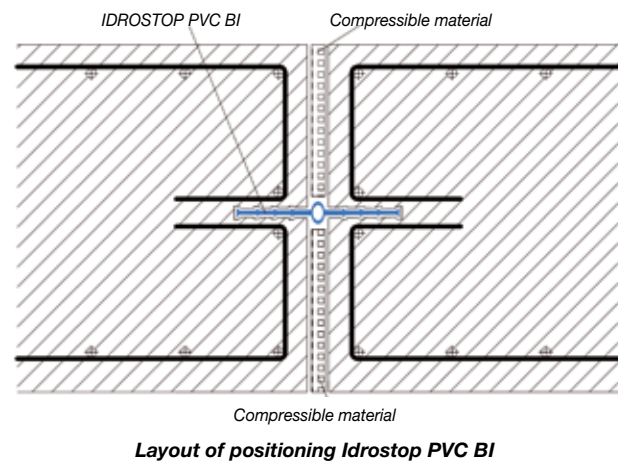
- type of structure (for both types of **Idrostop PVC**);
- amount and type of movements predicted (no movement, axial movement, a combination of axial and transversal movements, etc.);
- thickness of the cast concrete (only valid for **Idrostop PVC BI**).

APPLICATION PROCEDURE

Idrostop PVC BI - embedded in the concrete

This type of joint is positioned at half thickness of the foundations or wall and must be stretched and held in position with wire. One end of the wire is attached to the reinforcement rods while the other end is attached to the waterstop. Insert a suitable type of compressible material between the first and second cast of concrete to form the joint and to avoid that this one is clogged by a rigid material.

For structural joints on vertical walls only, we remind you that the joint must be embedded in the foundation pad to a depth of at least 10 cm.

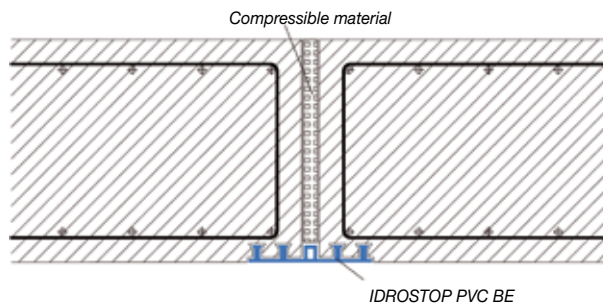


Idrostop PVC BI Idrostop PVC BE

Idrostop PVC BE - external joint

This type of joint is fastened in place by nailing it directly to the formwork or the layer of lean concrete. The fixing lugs must face towards the next layer of cast concrete so that it

In the area immediately around the waterstop, vibrate the concrete so that it is perfectly compacted. When vibrating the concrete, care must be taken to avoid damaging or moving the **Idrostop PVC**.



Layout of positioning Idrostop PVC BE

HOT-WELDING THE ENDS OF THE JOINT ON SITE

The procedure to join the **Idrostop PVC** and create a perfect bond is by heating the adjacent pieces with a Leister electronic hot air blower. The ends of the parts to be joined must be cut straight and perfectly aligned. Set the Leister to the following temperatures to join the waterstop: +280°C in the bulb area and +320°C for the other areas.

Butt weld - Idrostop PVC BI

Start the weld from the lower part of the bulb area. After bringing the two edges of the joint up to temperature, press them together for a few seconds. It is very important that the welding process is not carried out too quickly. The welded joint must be left cool down because when PVC is overheated shrinkage cracks may

forms a perfect bond. As with embedded joints, insert a suitable type of compressible material between the first and second cast of concrete to form the joint and to avoid that this one is clogged by a rigid material.



Structural joints in a wall with a PVC profile embedded in the foundation pad before casting



Structural joints in a wall with a PVC profile embedded in the foundation pad after casting



Idrostop PVC BI embedded in the foundation pad with Mapegrout Hi-Flow before demolishing part of it



Steps to form a butt weld in Idrostop PVC BI: a) heat the two edges of the bulb with a Leister; b) press the two edges together to form a bond; c) slightly overlap and weld the ends of the rims of the waterstop together; d) final step of the welding procedure; e) apply a strip of PVC to strengthen the welded bulb; f) apply a strip of PVC to strengthen the welded rims of the waterstop



Steps to form a 90° weld in Idrostop PVC BE: a) cut the bulb and fixing lugs in the PVC BE at 45°; b) heat the two rims to be welded with the Leister; c) press the two rims together and continue heating with the Leister; d) 90° weld in the waterstop

then develop. After welding the bulb area, the next step is to slightly overlap and weld short sections of the rims at a time. Always make sure that each welded portion cools down correctly. The welded beads must be reinforced with strips of PVC cut from the waterstop. Pay particular attention around the bulb, which is the most stressed area when in service.

90° weld - Idrostop PVC BE

The first step is to make a 45° cut in the central bulb and the fixing lugs. Then heat the rims with the Leister and press the two edges together to form a 90° weld.

Bult weld - Idrostop PVC BE

Please refer to “Bult weld - Idrostop PVC BI”.

Sizes available

Idrostop PVC BI is available in three sizes:

- Idrostop PVC BI20 (width 20 cm);
- Idrostop PVC BI25 (width 25 cm);
- Idrostop PVC BI30 (width 30 cm).

Idrostop PVC BE is available in two sizes:

- Idrostop PVC BE20 (width 20 cm);
- Idrostop PVC BE24 (width 24 cm).

PACKAGING

Idrostop PVC is supplied in 25 metre rolls wrapped in polyethylene sacks.

STORAGE

Store in a dry place at a temperature of between +10°C and +40°C.

PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

All relevant references for the product are available upon request and from www.mapei.com



Sealing a structural joint on foundation

TECHNICAL DATA SHEET FOR WATERSTOPS

(valid for all kinds of waterstops)

Typical physical-mechanical properties	Method	u.m.	Results
Hardness	ISO 868 ASTM D2240	Shore A	70 ± 3
Weight density	ISO 1183 ASTM D 792	g/cm ³	1,31 ± 0,03
Tensile strength	ISO 527 ASTM D638	N/mm ²	14
Breaking strain	ISO 527 ASTM D638	%	450
Temperature of use	-	°C	-30; +70