



Waterstops

PVC (Polyvinyl Chloride) Waterstop

PVC waterstop is an elastomer plastic material extruded by high quality polyvinyl chloride, special resins and chemical additives such as plasticizers and stabilizers. PVC waterstop is designed for use in any concrete structure which contains joints and is subjected to a hydrostatic load on one face of the structure. It prevents water movement through concrete joints in water reservoirs, canals, dams, sewage treatment plants, bridges, stadiums, basements, floor slabs, parking garages, and similar structures.

PVC plastic waterstop, also known as "plastic waterstop", is a waterstop product made from PVC polyvinyl chloride resin and various additives, which are mixed, granulated, extruded and other processes to produce a waterstop material. This product utilizes the elastic deformation characteristics of elastic materials to play a leak proof and anti-seepage role in building construction joints, and has the characteristics of corrosion resistance and good durability.



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PVC waterstop utilizes the elastic deformation characteristics of elastic materials to play a leak proof and anti-seepage role in building construction joints, and have the characteristics of corrosion resistance and good durability. PVC plastic waterstop has strong corrosion resistance, low temperature resistance, high tensile strength, excellent flexibility and durability, which can effectively prevent water penetration and resist oxidation and ultraviolet radiation, extending its service life.

PVC (Polyvinyl Chloride) Waterstop Features:

- Environmental safety: PVC plastic waterstop is made of environmentally friendly materials and will not have any impact on human health or the environment;
- Strong durability: PVC plastic waterstop is made of polyvinyl chloride material, which has high corrosion resistance, heat resistance, and cold resistance, and a long service life;
- Good impermeability: PVC plastic waterstop has a smooth surface and are not prone to cracking or cracking during use, effectively preventing water penetration;
- Convenient transportation and installation: PVC plastic waterstop is lightweight, easy to transport, and also easy to install.

PVC waterstops (Polyvinyl Chloride) are used in construction projects to provide a watertight seal and prevent the passage of water through joints or cracks in concrete structures. They are produced a durable and flexible thermoplastic polymer.

Drainage Products: PVC (POLYVINYL CHLORIDE) WATERSTOP

APPLICATION

PVC plastic waterstop is mainly used for foundation engineering that is integrated with concrete and installed in construction joints and deformation joints during concrete pouring. Such as tunnels, culverts, water diversion aqueducts, dams, liquid storage structures, underground facilities, etc.

SPECIFICATIONS OF PVC (POLYVINYL CHLORIDE) WATERSTOP

Physical properties	Test methods	Minimum value
Water absorption	ASTM D-570	15% - 20%
Tear resistance	ASTM D-624	300 psi
Specific gravity	ASTM D-792	1.38 ± 0.05
Hardness shore A15	ASTM D-2240	79 ± 3
Tensile strength	ASTM D-638 Type IV	2000 psi
Ultimate elongation	ASTM D-638 Type IV	360%
100% modulus	ASTM D-638 Type IV	725 psi
Low temperature brittleness (Tb) °F (°C)	ASTM D-746	-35 (-37) passed
Stiffness in Flexure	ASTM D-747	600 psi
Ozone Resistance	ASTM D-1149	No Failure
Accelerated Extraction, CRD-572		
Tensile	CDR-C-572	1850 psi
Elongation	CDR-C-572	350%
Effect of Alkali, CRD-572		
Weight Change	CRD-572	+0.25%-0.1%
Change in Hardness Shore A	ASTM D-2240	± 5 points

Comparison between medium-buried PVC waterstops and back sticks PVC waterstops:

The PVC buried plastic waterstop is equipped with installation holes for easy on-site fixation and positioning; There are anti clogging check valves on both sides of the grouting pipes, which will not block the grouting holes when pouring concrete; During grouting, the grout outlet flows smoothly; Rapid grouting repair can be carried out through grouting pipes and check valves, and the waterproof quality after repair is reliable; PVC buried plastic waterstops are widely used in the construction of construction joints and deformation joints.



The surface sealing strip of the back attached plastic waterstop is used to prevent water from moving through construction joints, contraction joints, movement joints, and expansion joints. Backstick plastic waterstops are widely used in the construction of contraction joints and construction joints. It is suitable for the construction of all underground waterproofing and drainage structures.

PROJECTS CASE OF PVC (POLYVINYL CHLORIDE) WATERSTOP



[Bridge laying in Iraq]



[External Wall in Jordan]

CONSTRUCTION OF PVC WATERSTOP

1. During the construction process, due to the presence of many sharp stones and steel bars in the concrete, attention should be paid to avoiding mechanical damage to the waterstop during operation.
2. When positioning the plastic waterstop, it is necessary to ensure that it fits smoothly with the concrete interface, and there should be no flipping or twisting of the waterstop. Otherwise, it should be adjusted in a timely manner.
3. When pouring fixed waterstops, it is necessary to prevent the waterstop from shifting and affecting the waterstop effect.
4. Plastic waterstop joints can be secured by bonding, hot welding, and other methods to ensure their firmness.
5. During the pouring process of concrete, attention should be paid to sufficient vibration to achieve a full bonding between the waterstop and the concrete.

Precautions for construction of waterstops:

During the construction process, users should be careful not to cause mechanical damage to the plastic waterstop due to the presence of many sharp stones and steel bars in the concrete. When positioning the plastic waterstop, it is necessary to ensure that it fits smoothly with the concrete interface, and there should be no flipping or twisting of the waterstop. Otherwise, it should be adjusted in a timely manner. When pouring fixed waterstops, it is necessary to prevent the waterstop from shifting and affecting the waterstop effect. The joint of the waterstop can be secured by bonding, hot welding, and other methods. During the pouring process of concrete, attention should be paid to sufficient vibration to achieve a full bonding between the waterstop and the concrete.

- PVC waterstop is suitable for Water and wastewater treatment facilities;
- PVC waterstop is suitable for Dams, locks, canals, reservoirs, and aqueducts;
- PVC waterstop is suitable for Tunnels and Culverts;
- PVC waterstop is suitable for highway and railway projects;
- PVC waterstop is suitable for artificial lake and water tanks;
- PVC waterstop is suitable for retaining dams and reservoirs.



PVC water stops can be welded together when the length is not sufficient or when they need to provide in different directions.

Welding is done by heating the waterstops together and holding tightly them together for some time until the connected.

Waterstop can be continued in any direction based on the requirement of the construction. When there are water tightness requirements and waterstops are provided, they shall be provided at all the construction joints.