



EVA (Ethylene-Vinyl Acetate Copolymer) Waterstop

EVA waterstop is a new type of waterstop material made of ethylene-vinyl acetate resin and various chemical additives through special processes. EVA waterstop has high elasticity and high tensile strength, and is not easy to be damaged by tension. EVA waterstop has excellent corrosion resistance and are therefore impervious to corrosion in underground buildings or wastewater treatment facilities.

EVA (ethylene vinyl acetate) waterstop is manufactured from polyvinyl chloride, EVA resin and a variety of additives by special production processes. It is used for water leakage and permeation prevention in building construction joints by taking advantage of elastic deformation property of elastomer material. EVA waterstop is highly resistant to corrosion and it has very long life span. It can be used for various above or under ground buildings and it is especially suitable for water storage structures, such as water reservoirs, waste water treatment plants, dams, subways, tunnels, retaining walls, swimming pools, bridges and culverts.



[EVA (Ethylene-Vinyl Acetate Copolymer) Waterstop]



[EVA (Ethylene-Vinyl Acetate Copolymer) Waterstop]

EVA waterstop fully utilizes the good elasticity of ethylene vinyl acetate resin, playing a leak proof and anti-seepage role in building construction joints, and has the characteristics of corrosion resistance and good durability. EVA waterstop is widely used in the structural joints of building foundation, and plays the role of leak prevention and seepage prevention.

EVA (Ethylene-Vinyl Acetate Copolymer) Waterstop Features:

- Water resistance: Closed cell structure, non absorbent, moisture proof, and good water resistance;
- Corrosion resistance: Resistant to corrosion from chemicals such as seawater, oil, acid, and alkali, antibacterial, non-toxic, odorless, and pollution-free;
- Processability: No joints, and easy to perform processing such as hot pressing, cutting, gluing, and bonding;
- Anti vibration: High rebound and tension resistance, high toughness, with good shock and cushioning performance;
- Thermal insulation: Excellent insulation, cold resistance, and low temperature performance, resistant to severe cold and exposure to sunlight;
- Sound insulation: Closed bubble holes, good sound insulation effect.

Drainage Products: EVA (ETHYLENE-VINYL ACETATE COPOLYMER) WATERSTOP

APPLICATION

(1) EVA waterstop can be applied to any ground or underground building, forming a long-lasting and sturdy water barrier, especially suitable for water storage and retaining structures such as reservoirs, sewage tanks, dams, subways, tunnel water retaining walls, etc.

(2) EVA waterstop, as an auxiliary material for waterproof sheet, can be widely used for waterproofing in basement, subway tunnels, highway and railway tunnel projects, as well as waterproofing and anti-seepage in dams, artificial lakes, water tanks, sewage treatment plants, landfill sites and other projects.

SPECIFICATIONS OF EVA (ETHYLENE-VINYL ACETATE COPOLYMER) WATERSTOP BOARD

TECHNICAL INDICATORS OF EVA (ETHYLENE-VINYL ACETATE COPOLYMER) WATERSTOP ASTM

PHYSICAL PROPERTIES	TEST METHOD	Premium Grade
Tensile Strength	ASTM D 638 Type IV	13 MPa
Ultimate Elongation	ASTM D 638 Type IV	340%
Low Temp. Brittleness	ASTM D 746	-
Tear Resistance	ASTM D 624 Die "B"	50 kn/m
Modulus of Elasticity	ASTM D 638 Type IV	10 MPa
Effects of Alkali Change in mass	ASTM D 471 CGSB 41-GP-34M	4.50%
Ultimate Elongation	ASTM D 471 CGSB 41-GP-35M	28

TECHNICAL INDICATORS OF EVA (ETHYLENE-VINYL ACETATE COPOLYMER) WATERSTOP GB

Item		Parameter
Tensile strength at break (MPa)		≥ 16
Elongation at break		≥ 550%
Tear strength (kN/m)		≥ 60
Water tightness (30 min. without leakage) (MPa)		0.3
Cold bending (°C)		≤ 35
Stretching and shrinkage amount of heating (mm)	Stretching	< 2
	Shrinkage	< 6
Hot air aging 70 °C×168 h	Tensile strength retention at break	≥ 80%
	Elongation retention at break	≥ 70%
	100 % elongation appearance	Without crack
Alkali resistance 110% Ca(OH) ₂ normal temperature 168 h	Tensile strength retention at break	≥ 80%
	Elongation retention at break	≥ 90%

PROJECTS CASE OF EVA (ETHYLENE-VINYL ACETATE COPOLYMER) WATERSTOP



[Bridge Construction in Kyrgyzstan]



[Tunnel in Kazakhstan]

CONSTRUCTION OF EVA 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.

- EVA waterstop is suitable for basement walls;
- EVA waterstop is suitable for basement slabs, raft foundation when used as the basement floor;
- EVA waterstop is suitable for subway and Tunnels;
- EVA waterstop is suitable for canals;
- EVA waterstop is suitable for spillway walls and ogee;
- EVA waterstop is suitable for other liquid retaining structures.



The advantages and disadvantages of EVA waterstop:

Advantages:

Great corrosion resistance and waterproof performance, high tensile strength and elasticity, and high hydrostatic pressure resistance. Generally, it needs to be hot welded to the surface of the pipe or waterproof coil by machine).

Disadvantages:

High hardness and high cost. Generally, specified EVA materials are required for special projects. Only black and white colors are available.