



# ECA PVC Waterstops

PVC WATERSTOP FOR WATER RETAINING AND WATER EXCLUDING CONCRETE STRUCTURES

## DESCRIPTION

ECA PVC Waterstops are constructed from high-quality PVC resin, designed to provide long-lasting performance and protection against environmental factors such as ozone, oxidation, and corrosion. Their cross-sectional design includes multiple ribs for anchoring to concrete and a flexible center bulb to accommodate expansion and contraction. These waterstops prevent water passage through joints while allowing for joint movements, meeting strict performance standards for exceptional technical characteristics.

## USES

ECA PVC Waterstops are designed as a comprehensive sealing solution for construction and expansion joints in the following structures:

- both water-retaining and water-excluding concrete structures
- Sewage tanks, drainage canals
- Reservoirs, pools, dams, culverts, treatment plants
- Foundations, basements, decks, tunnels
- pumping stations, chambers, parking facilities, subways, bridges, and retaining walls

## ADVANTAGES

- Resilient and flexible, it withstands weathering, low temperatures, water immersion, concrete additives, and most organic chemicals
- Defect-free in material and craftsmanship, ensuring durability without brittleness or cracking under normal conditions
- Resilient in shore A-hardness, maintaining its characteristic performance in normal water control applications
- Resistant to normal abrasion and tear failures, offering long-lasting reliability
- Withstands normal expansion and contraction in joints when professionally installed
- Features a multi-rib design for an effective grip and a reliable water barrier

## TYPICAL PROPERTIES

Water Absorption	0.02
Tear Resistance	225 lb/in
Ultimate Elongation	360%
Tensile Strength	2000 PSI
Low Temperature Brittleness	Passed at -37°C
Stiffness in Flexure	700 PSI
Specific Gravity	1.40
Hardness Shore A15	79 ± 3
Tensile Strength After Accelerated Extraction (CRDC572)	1850 PSI
Elongation After Accelerated Extraction (CRD C572)	≥ 350%
Changes in Weight and Harness Due to Alkali Exposure After 7Days (CRD C572)	0.1% + 1 point

- Reinforced edge flange with brass eyelets enables easy wiring to reinforcement, improving installation ease and structural integrity.

## STANDARD

ECA PVC Waterstops complies with the following standards:

- ASTM D638 : Tensile strength for plastic materials
- ASTM D570 : Water absorption rate for plastic materials when immersed with water
- ASTM D624 : Tear strength for rubber and thermoplastic materials
- ASTM D747 : Apparent bending modulus
- ASTM D792 : Density and specific gravity of solids plastic
- ASTM D2240 : Hardness of rubber materials
- ASTM D5750 : Rubber Deterioration

## APPLICATION

ECA PVC Waterstops should be fixed within the concrete, Held under tension by concrete on either side, these waterstops function as a watertight diaphragm.

To secure their placement, specially prepared split stop ends are used, and the waterstops are tightly bound with wires to neighboring reinforcement bars.

This ensures that the waterstops remain stable and do not bend under the pressure of the poured concrete.

## SITE WELDING

In terms of jointing details, both ends of the waterstop should be cut straight using a sharp knife with the aid of a jig.

Heat the ends with welding equipment by pushing both ends against the blade until they melt into a bead, taking approximately 1 minute.

After releasing the jig and removing the knife, bring the molten ends together, allowing them to cool for about 3 minutes.

Following this, release the jig and remove the waterstop, inspecting the welded joint for continuity and correct alignment of profiles.

## PACKAGING

ECA PVC Waterstops is supplied in 15 m, 20 m and 25 m rolls.

## STORAGE

ECA PVC Waterstops should be stored and maintained in a shaded area, away from both chemicals and sharp edges.

## HEALTH AND SAFETY



For more information, please check the Material Safet Data Sheet.

## CONTACT

For information regarding the licensee or manufacturer for ECA, please contact us at [techsupport@alfaihaengineering.com](mailto:techsupport@alfaihaengineering.com).

## DISCLAIMER

ECA aims to ensure the accuracy of information and recommendations in the product literature. However, due to variations in materials, substrates, and site conditions, and without control over product application, storage, weather, and usage conditions, ECA cannot be held liable for any resulting issues.

Uses		Type	Width (mm) $\pm 5$	Roll Length (m)	Nominal Thickness (mm) $\pm 10\%$
<b>Centrally Placed Waterbars:</b> Installation in the center of concrete structures					
Construction Joints		V-15	150	20	3.0 - 5.0
		V-20	200	20	3.0 - 5.0
		V-25	250	20	3.0 - 5.0
Expansion Joints		O-15	150	20	3.0 - 4.5
		O-20	200	20	3.0 - 4.5
		O-25	250	20	3.0 - 4.5