



## PVC Waterstop Submittal Package

Project Name: \_\_\_\_\_

Architect: \_\_\_\_\_

Engineer: \_\_\_\_\_

General Contractor: \_\_\_\_\_

Sub Contractor: \_\_\_\_\_

Specification Section: \_\_\_\_\_

Profile Type: \_\_\_\_\_

Profile Catalog #: \_\_\_\_\_

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## Technical Data Sheet PVC Waterstop Compound

Typical Properties	Minimum Value	ASTM Method
Water Absorption	0.15%	D-570
Tear Resistance, lb/in (kg/cm)	300 (53.5)	D-624
Specific Gravity, (+/-0.05)	1.38	D-792
Hardness, Shore A (+/-3, 10 sec. Delay)	80	D-2240
Tensile, psi (kg/cm <sup>2</sup> )	2000 (140.61)	D-638, Type IV
Elongation, %	350	D-638, Type IV
100% Modulus, psi (kg/cm <sup>2</sup> )	725 (50.75)	D-638, Type IV
Brittle Point (Tb), °F(°C)	-35 (-37)	D-746
Stiffness in Flexure, psi (kg/cm <sup>2</sup> )	600 (42.18)	D-747
Ozone Resistance	No Failure	D-1149

### Accelerated Extraction, CRD-C572

Tensile, psi (kg/cm <sup>2</sup> )	1600 (112.49)	D-638, Type IV
Elongation, %	300	D-638, Type IV

### Effect of Alkali, CRD-C572

Weight Change, %	-0/+0.25	—————
Change in Hardness, Shore A	±5	D-2240

This material meets or exceeds U.S. Army Corps of Engineers specification **CRD-C572-74**.

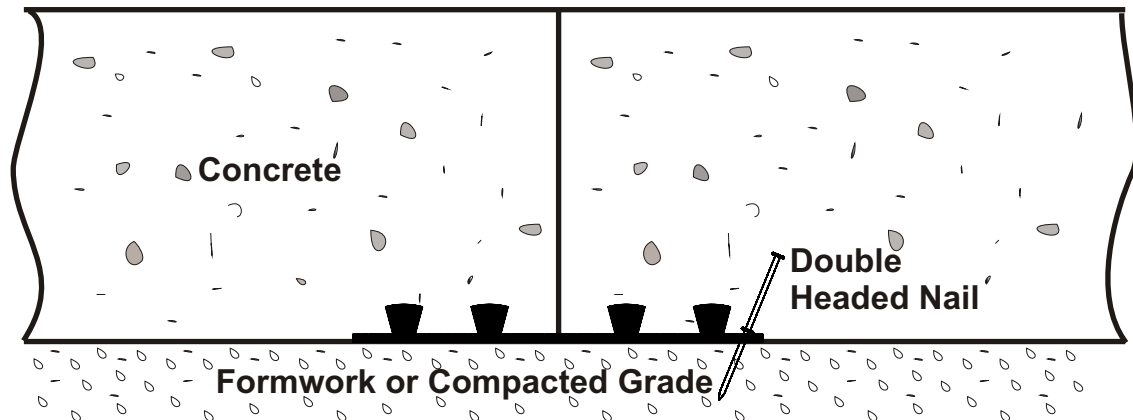
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## **Base Seal Waterstop Installation Procedure**

### **Preparation:**

During progress of work all waterstop should be protected from damage and should be free of oil, dirt and concrete spatter. Waterstop coils should be uncoiled several days before installation to insure ease of installation and fabrication. Be sure steel reinforcing bars do not interfere with proper positioning of waterstop.



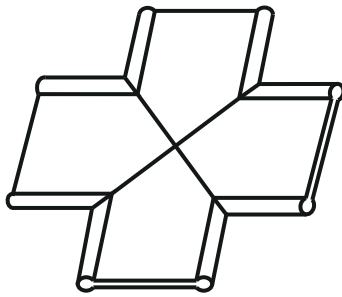
### **Location & Placement of Base Seal:**

The joint where the Base Seal will be placed should be located by use of the construction drawings. The center of the Base Seal should be placed in the center of the concrete joint as shown on construction drawings. Due to the design of the Base Seal, a continuous support system (formwork or compacted grade) should be used to support the Base Seal during the installation process to prevent the Base Seal from becoming deformed. The Base Seal should be placed at that location and should be sufficiently held in place to insure that it is correctly positioned to form continuous watertight diaphragm in the joint unless otherwise shown. Please make sure the ribbed side of the Base Seal will be in contact with the concrete. The use of a double headed nail should be used if the Base Seal needs to be attached to formwork. If the Base Seal will be placed directly on compacted grade, the use of larger stakes should be used to secure the Base Seal.

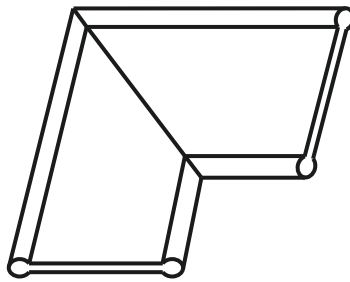
### **Placement of Concrete:**

If the Base Seal is made for a moving joint, then an expansion board will most likely be used. Formwork would need to be provided to secure the expansion board to the center of the Base Seal and on top of the bulb. Care should be taken to prevent any puncture of the Base Seal. Then pour the concrete on the side of the expansion board and let it cure. Then remove the formwork and continue with second pour. If the Base Seal is made for construction or control joints, then both slabs can be poured at once. Care should be taken during concrete placement to prevent excessive movement of the Base Seal to insure against displacement. Always thoroughly and systematically vibrate concrete around the waterstop to avoid air entrapment and to provide a positive contact between the Base Seal and concrete. Make sure to prevent any damage or ultraviolet exposure to the external side of the Base Seal.

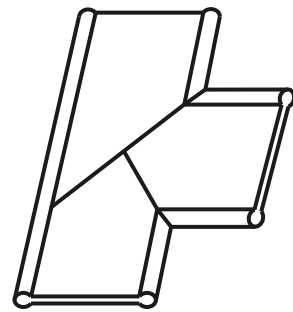
## Common Intersections



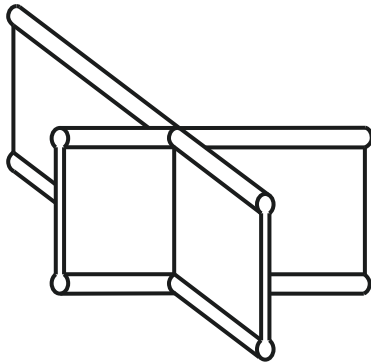
Flat Cross



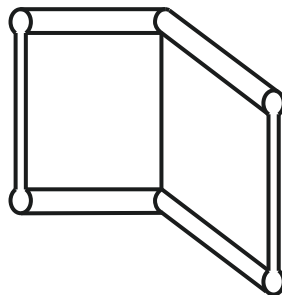
Flat Ell



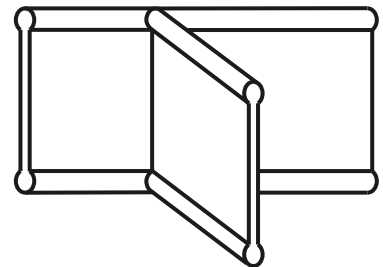
Flat Tee



Vertical Cross



Vertical Ell



Vertical Tee



## Waterstop Splicing Field Guide

Following is the proper procedure for field splicing of nonmetallic waterstop. BoMetals highly recommends that all intersections be factory fabricated and that only straight butt joints be attempted in the field.

### Equipment:

You will need a Teflon covered waterstop splicing iron (part # SI-414 Splicing Iron), a sturdy heat resistant work surface (part # ST-10 Field Splicing Machine), access to 115 VAC power, circular saw with carbide tipped blade, framing square, and miscellaneous jigs and fixtures to aid splicing.

**Caution: When splicing PVC waterstop, inhalation of the fumes may be harmful to your health. Splicing should be done in only in well-ventilated areas.**

### Splicing:

1. Preheat splicing iron to 350°F-380°F for PVC or 390°F-410°F for TPER. Preheat iron for at least 30 minutes to assure even temperature.
2. Layout and cut the ends square using carbide tipped circular saw. Ends must be cut square and cleaned of debris to assure proper alignment and bond strength.
3. Dry Fit joint to check fin and bulb alignment before welding. Repeat step 2 if necessary.
4. Place iron between butt ends of the waterstop. Apply light and even pressure to the waterstop in the direction of the iron. Insure that the butt ends are heated evenly across the waterstop profile. A slot in the work surface would be helpful in allowing the iron to protrude below the bottom of the waterstop profile. Keep the waterstop in place and pressure applied until a 3/16" bead forms around the entire outside edge of the waterstop profile on both butt ends. Caution: Iron and plastics are hot. Take precaution to avoid burns. Do not hold the waterstop in contact with the iron so long that it begins to darken and burn. Burnt material will contaminate the joint and cause possible joint failure.
5. Remove iron and **immediately** join the butt ends together with light and even pressure. Care must be taken to align the profiles and maintain the continuity of the bulbs and ribs. Hold in place for approximately 3 minutes or until the bond is cooled enough to hold together. Do not bend, stretch, or stress the joint for approximately 10 minutes or until it has cooled to room temperature. Failure to join the ends quickly or premature stress can result in a poor weld and joint failure.
6. Wipe the iron clean with a clean dry cloth to remove any molten material. Burnt material will contaminate future joints and cause possible failures. Caution: Iron and plastics are hot. Take precaution to avoid burns.
7. Contact BoMetals Inc. 1-800-862-4835 with any questions or for assistance.