



SUGGESTED MASTER SPECIFICATION SECTION 03 15 13 STAINLESS STEEL WATERSTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Provision of waterstops embedded in concrete and spanning control, expansion, and/or construction joints to create a continuous diaphragm to prevent fluid migration.
- B. Formed metallic waterstops for use in concrete joints when non-metallic waterstops are inappropriate, such as severe chemical and high service temperature environments.

1.02 REFERENCES

- A. Chemically resistant waterstop performance is not currently governed by state or federal standard specifications. EPA Title 40 CFR requires the use of chemically resistant waterstop.

1.03 QUALITY ASSURANCE

- A. Waterstop manufacturer shall demonstrate five years (minimum) continuous, successful experience in production of waterstops.
- B. Store waterstops in protected area to prevent damage prior to installation.

1.04 SUBMITTALS

- A. Submit manufacturers test data for chemical resistance.
- B. Submit CAD shop drawings and fabrication drawings indicating placement of waterstop and shop fabrications.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Provide formed stainless steel grade [316L], gauge [20] waterstop as manufactured by Greenstreak, profile style number (fill in profile style number).
- B. The stainless steel waterstop shall be suitable for severe chemical and high service temperature environments when non-metallic waterstops are not acceptable, as determined by specific testing for the application.
- C. Performance Requirements as follows:

Property	Test Method	Grade 316L
Ultimate Tensile Strength	ASTM A 370	75,000 psi (515 Mpa)
Duct Elongation in 2" min.	ASTM A 370	40%
Rockwell B Hardness	ASTM A 370	95 max.
Yield Strength	ASTM A 370	30,000 psi (205 Mpa)

2.02 ACCESSORIES

- A. Provide factory made waterstop fabrications for all changes of direction, intersections, and transitions leaving only straight butt joint splices for the field.
- B. TIG welding equipment.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ensure steel reinforcing bars do not interfere with proper position of waterstop.
- B. Clean concrete joints and waterstop of dirt and construction debris prior to second pour of concrete.

3.02 INSTALLATION

- A. Lap metal waterstop at splices and continuously weld exposed edge on containment side. Use .035 diameter 316 stainless steel alloy filler rod for grade 316L stainless steel.
- B. Weld factory supplied intersections and directional changes to straight length sections per method of 3.02.A.
- C. All welds to be made by qualified welder with TIG welding experience.
- D. Splices to be free from defects as defined in "Field Quality Control" in section 3.03
- E. Center waterstop on joint with peak of "V" section oriented toward containment side.
- F. Seal base (open side) of "V" expansion area in metal waterstop with one layer of two-inch wide duct tape.
- G. At expansion joints, keep "V" area unembedded.
- H. Place concrete without disturbing waterstop and thoroughly vibrate concrete to maximize intimate contact between waterstop and concrete.
- I. After first pour, clean protruding waterstop leg to ensure full contact of second pour.

3.03 FIELD QUALITY CONTROL

- A. Waterstop splicing defects which are unacceptable include, but are not limited to the following:
 - 1. Tensile strength less than 80 percent of parent section.
 - 2. Misalignment of "V" section and flanges greater than 1/16 inch.
 - 3. Visible porosity or "burn-through" in the weld.
 - 4. Adhesive bonds, free lap joints, or lap joints with mechanical fasteners.
 - 5. Misalignment of waterstop splices resulting in misalignment of waterstop in excess of ½ inch in 10 feet.

END OF SECTION