



SECTION 03 15 13

WATERSTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. CONTRACTOR shall furnish and securely install expanding rubber waterstops where shown or specified in the DRAWINGS. The WORK includes cleaning of concrete surfaces and installation of expanding rubber waterstop.

1.02 RELATED SECTIONS

- A. The following is a list of SPECIFICATIONS which may be related to this section:
 - 1. Section 03 15 00, Construction Joints.
 - 2. Section 03 31 00, Structural Concrete.

1.03 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. ASTM International (ASTM):
 - a. D412, Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
 - b. D2240, Standard Test Method for Rubber Property—Durometer Hardness.

1.04 SUBMITTALS

- A. Provide product data for the following:
 - 1. Waterstop Product.
 - 2. Adhesive.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver the waterstop materials to the PROJECT site in the manufacturer's unpacked containers with all labels intact and legible at time of use. Materials shall be stored in a secure, indoor, dry area. Maintain the waterstops in a dry condition during delivery, storage, handling, installation, and concealment.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Hydrophilic Rubber Waterstop:



1. The waterstop shall have the minimum performance standard of:

Property	ASTM Standard	Results
Tensile Strength (MPa)	D412	0.98
Elongation	D412	550
Hardness (Hs)	D2240	30 Durometer Type A
The time period to maximum volume expansion is 35 days.		

2. Materials approved for use are:

- a. Adeka Corporation; MC-2010M.
- b. Adeka Corporation; KM-3030M.
- c. Adeka Corporation; P201 (except in contact with potable water).
- d. Adeka Corporation; KC Series.

B. Adhesive:

1. The adhesive shall be 3M-2141 as manufactured by the 3M Company, or Adeka Corporation H-1000 Ultra Bond.

PART 3 EXECUTION

3.01 GENERAL

- A. Coordinate as required with other trades and SPECIFICATIONS to ensure proper execution of the waterstop installation.
- B. The components and installation procedures shall be in accordance with the manufacturer's printed specifications and recommendations. Installation shall be performed by skilled workers who are trained in procedures and methods required for proper performance of the waterstop.

3.02 EXAMINATION

- A. Examine the concrete surface and correct any surface imperfections which may prevent proper installation and performance of the waterstop. The finished concrete surface, prior to surface preparation, shall be equal to a steel trowel finish.

3.03 SURFACE PREPARATION

- A. Concrete surfaces shall be clean and free of dirt, saw dust, laitance, grease, form oils, form release agent, or other contamination to ensure proper adhesion of the waterstop to the concrete surface. Use a wire brush to lightly roughen the surface. Remove all concrete dust with a soft brush.

3.04 WATERSTOP PLACEMENT

- A. Measure and cut an exact length of waterstop. Splices are not permitted in the waterstop in vertical wall joints of structures. Splices in horizontal joints are



acceptable, however, only one (1) splice is permitted in twenty five (25) feet. Splice of waterstops in horizontal joints shall be made by butting and gluing the ends of the waterstop with an approved adhesive.

- B. Refer to the manufacturer's recommendations for minimum clearance to a concrete face. Unless a greater clearance is recommended by the manufacturer, the minimum clearance shall be two (2) inches. Use the greater clearance if the recommended clearance is more than two (2) inches.
- C. Using a brush, apply a uniform coat of adhesive to the concrete surface along the line of placement. Apply a uniform coat of adhesive to the waterstop. Gaps in the glue application shall not be permitted.
- D. After the adhesive has dried to a tacky condition (about fifteen [15] minutes in the summer and thirty [30] minutes in the winter), firmly press the waterstop to the concrete surface. When installing the waterstop on curved surfaces such as pipes, temporary bands (for example, wire or rope) may be used to assist in securing the waterstop to the surface. Any temporary means of securing the waterstop shall be removed prior to placing concrete or grout.
- E. Concrete placement within twelve (12) hours is required. The waterstop shall be protected from water and from displacement prior to concrete placement. During concrete placement, CONTRACTOR shall visually observe the waterstop to ensure proper placement and alignment.

END OF SECTION



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