

SECTION 031510

Hydrophilic Waterstops

Adcor™ ES

PART 1 — GENERAL

1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including General and Supplementary Conditions and Division 1 General Requirements, apply to the work of this section.

1.02 SUMMARY

- A. Section provides for an expanding hydrophilic waterstop as specified herein, illustrated on project drawings, or as required to complete the work to comply with waterproofing warranty requirements.
- B. System Description:
 - 1. Waterstop Strip: A non-Bentonite hydrophilic waterstop with a minimum swell as per Section 2.02
 - 2. Accessories for complete waterstop application
- C. Related Sections: Other specification sections which directly relate to the work of this section include, but are not limited to, the following:
 - 1. Section 033000 – Cast-In-Place Concrete
 - 2. Section 042000 – Unit Masonry
 - 3. Section 071100 – Dampproofing
 - 4. Section 076000 – Flashing and Sheet Metal
 - 5. Section 079200 – Joint Sealants
 - 6. Section 079500 – Expansion Control
 - 7. Section 334600 – Subdrainage

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation instructions, use limitations and recommendations.
- B. Shop drawings showing locations and extent of waterstop.
- C. Written documentation demonstrating Installers qualifications under the "Quality Assurance" article including reference projects of a similar scope.
- D. Samples: Submit representative sample of actual product.
- E. Warranty: Submit a sample warranty identifying the terms and conditions stated in Section 1.7.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Waterstop systems shall be manufactured and marketed by a firm with a minimum of 20 years' experience in the production and sales of building materials. Manufacturers proposed for use, but not named in these specifications shall submit evidence of ability to meet all requirements specified, and include a list of projects of similar design and complexity completed within the past five years.
- B. Installer Qualifications: A firm which has at least three (3) years experience in work for the type required by this section.
- C. Material: Waterstop shall be by single source manufacturer and shall be specially engineered to be a swellable and conformable polyurethane/butyl blended rubber free of sodium bentonite that expands when in contact with water.
- D. Pre-Installation Conference: A pre-installation conference shall be held prior to commencement of field operations to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work. Agenda for meeting shall include review of surface preparation, installation procedures, special details, inspection, protection, and repair procedures.
- E. Expansion Joints: Adcor ES is not designed for moving joints.
- F. Concrete: Concrete shall be normal weight structural concrete and provide a minimum cover of 3" around Adcor ES Waterstop.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials and products in the original, unopened containers with seals unbroken, labeled with the manufacturer's name, product brand name and type, date of manufacture and directions for storage and use.

- B. Store and handle materials in strict compliance with manufacturer's instructions, recommendations and material safety data sheets. Protect from damage from sunlight, weather, excessive temperatures and construction operations. Remove damaged material from the site and dispose of in accordance with applicable regulations.
 - 1. Store material off of ground and keep dry.
 - 2. Provide cover for material to protect top and sides.
- C. Sequence deliveries to avoid delays, but minimize on-site storage.

1.06 PROJECT CONDITIONS

- A. Perform work only when existing and forecasted weather conditions are within the limits established by the manufacturer of the materials and products used.
- B. Proceed with installation only when substrate construction and preparation work is complete and in condition to receive waterstop.
- C. Do not allow waste products (i.e. petroleum, grease, oil, solvents, vegetable or mineral oil, animal fat, acids, etc.) to come into contact with the waterstop. Any exposure to foreign materials or chemical discharges must be presented to the Membrane Manufacturer to determine the impact on the waterstop performance.
- D. Maintain environmental conditions within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- E. General contractor shall assure adequate protection during and after the application of the waterstop.

1.07 WARRANTY

- A. Upon completion of work, provide a copy of Manufacturer's standard warranty.

PART 2 — PRODUCTS

2.01 GENERAL

- A. All waterstop materials shall be manufactured and supplied by:

GCP Applied Technologies
62 Whittemore Avenue, Cambridge, MA. 02140
Telephone: 866-333-3726

2.02 MATERIALS

- A. Hydrophilic Waterstop Strip: Adcor™ ES by GCP Applied Technologies; a swellable, conformable polyurethane/butyl blended rubber based material free of sodium bentonite.

- B. Waterstop Physical Properties:

PHYSICAL PROPERTIES FOR ADCOR™ ES HYDROPHYLIC WATERSTOP:

Property	Typical Value
Color	Grey
Size	1.0 in. x ½ in. x 16 ft. (25.4 mm x 12.7 mm x 4.9 m) rolls
Packaging	6 rolls per case
Hydrostatic Head Resistance	70 m (231 ft)
Wet - Dry Cycling [25 Cycles @ 231 ft. (70 m)]	No Effect
Adhesion to Concrete using Adcor ES Adhesive	Excellent

PART 3 — EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Examine conditions of substrates and other conditions under which this work is to be performed and notify the Architect, in writing, of circumstances detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected.

3.02 PREPARATION OF SUBSTRATES

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Do not install waterstop onto any substrates with standing water.

3.03 INSTALLATION

A. Refer to manufacturer's literature for recommendations on installation, including but not limited to, the following:

1. Construction Joint:

- a) On irregular concrete faces, apply a ½ in. (12 mm) bead of Adcor ES Adhesive as bedding for Adcor ES.
- b) Secure Adcor ES using masonry nails 1½ in. - 2 in. (40 mm – 50 mm) long with a washer ¾ in. (20 mm) in diameter. Hilti EM6-20-12 FP8 shot fired fixings with ¼ in. (6 mm) nuts and ¾ in. (20 mm) diameter washers may also be used. Fixings should be spaced at a maximum of 12 in. (300 mm) centers with a minimum spacing that ensures proper contact to substrate.
- c) Adcor ES joints should overlap a minimum of 4 in. (100 mm), ensuring full contact between jointed pieces.
- d) Adcor ES can be bent around corners; however, on complex geometry use Adocr ES Adhesive to fill any gaps.
- e) Any damaged sections should be removed and repaired with a new section of Adcor ES.
- f) Keep Adcor ES dry prior to pouring concrete.

2. Pipe Penetration:

- a) Adcor ES Adhesive must be applied to dry substrates only. Apply by brush to the substrate. Wait until surface is dry to touch, and then press Adcor ES firmly into place.
- b) Adcor ES joints should overlap a minimum of 4 in. (100 mm), ensuring full contact between jointed pieces.
- c) Keep Adcor ES dry prior to pouring concrete.

3.04 CLEANING AND PROTECTION

A. Protect membrane in accordance with manufacturer's recommendations until placement of concrete.

B. Inspect for damage just prior to placement of concrete and make repairs in accordance with manufacturer's recommendations.

gcpat.com | Customer Service: 1-866-333-3726

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