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AnAmerican National Standard

# Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures and Corrugated High Density Polyethylene Drainage Pipes[1]

This standard is issued under the fixed designation F2510/F2510M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers the design, material, and minimum performance requirements of resilient connectors used for connections between reinforced concrete structures conforming to Specifications C478 and C913 to annular corrugated profile wall high density polyethylene (HDPE) drainage pipe conforming to AASHTO M252 or Specification F2306/F2306M.

1.1.1 These connectors are designed to provide a positive seal between the pipe and manholes or other structures subjected to internal and external hydrostatic pressures less than 10.8 psi [74 KPa].

1.1.2 Testing under this standard is limited to hydrostatic pressures. Alternate air and vacuum pressure testing involve unique testing protocols and are not addressed under this standard.

1.1.3 Testing under this standard is conducted in a laboratory as a proof of design certification. Actual field performance testing would be accomplished and accepted under individual project performance standards or pipeline acceptance criteria, which is outside the scope of this standard.

NOTE 1—Infiltration or exfiltration quantities for an installed system are dependent upon many factors other than the connections between manhole structures and pipe, and allowable quantities must be covered by other specifications and suitable testing of the installed pipeline and system.

NOTE 2—This specification may be applied to other types of plastic drainage pipe. Consult with manufacturer of pipe for applicability to this standard.

1.2 The values stated in either inch-pound units or SI units are to be regarded separately as standard. Within the text the SI units are shown in brackets. The values stated in each system may not be exact equivalents: therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.3 The following precautionary caveat pertains only to the test methods portion, Section 7. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. For a specific precaution statement, see 7.2.3.*

## 2. Referenced Documents

2.1 *ASTM Standards:*[2]

A493 Specification for Stainless Steel Wire and Wire Rods for Cold Heading and Cold Forging

A666 Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar

C478 Specification for Precast Reinforced Concrete Manhole Sections

C822 Terminology Relating to Concrete Pipe and Related Products

C913 Specification for Precast Concrete Water and Wastewater Structures

D624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers

D746 Test Method for Brittleness Temperature of Plastics and Elastomers by Impact

D1566 Terminology Relating to Rubber

F412 Terminology Relating to Plastic Piping Systems

F477 Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

F2306/F2306M Specification for 12 to 60 in. [300 to 1500 mm] Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications

2.2 *Other Standards:*[3]

M 252 Standard Specification for Corrugated Polyethylene Drainage Pipe 75 to 250 mm Diameter

[1] This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.20 on Joining.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Available from American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001, http://www.transportation.org.