



Designation: C1478 – 19

# Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes, and Laterals<sup>1</sup>

This standard is issued under the fixed designation C1478; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers the minimum performance and material requirements for resilient connectors used for connections between precast reinforced concrete storm sewer structures conforming to Specification C478 and pipes, and between precast reinforced concrete pipe and laterals for storm drainage systems.

1.1.1 These connectors are designed to prevent soil migration between the pipe and storm sewer structure, and between the pipe and lateral.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are for information only.

NOTE 1—This specification covers the design, material, and performance of the resilient connection only. Connections covered by this specification are adequate for hydrostatic pressures up to 6 psi (14 ft) without leakage when tested in accordance with Section 7. Infiltration quantities for an installed system are dependent upon many factors other than the connections between storm sewer structures and pipe, and allowable quantities must be covered by other specifications and suitable testing of the installed pipeline and system.

NOTE 2—For installations that exceed 6 psi (14 ft), the user is cautioned to verify the amount of hydrostatic head pressure the connector will experience. If the total pressure applied to the connector exceeds the 6 psi limits of the specification, the user is advised to contact the connector manufacturer for alternative methods of connecting the pipe, or applicable alternative standards.

1.3 The following precautionary caveat pertains only to the test methods portion, Section 7, of this specification: *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* For a specific warning statement, see 7.2.4.

1.4 *This international standard was developed in accordance with internationally recognized principles on standard-*

*ization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

- 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 Circular Precast Reinforced Concrete Manhole Sections
- C822 Terminology Relating to Concrete Pipe and Related Products
- C913 Specification for Precast Concrete Water and Wastewater Structures
- D395 Test Methods for Rubber Property—Compression Set
- D412 Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
- D471 Test Method for Rubber Property—Effect of Liquids
- D543 Practices for Evaluating the Resistance of Plastics to Chemical Reagents
- D573 Test Method for Rubber—Deterioration in an Air Oven
- D624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
- D883 Terminology Relating to Plastics
- D1149 Test Methods for Rubber Deterioration—Cracking in an Ozone Controlled Environment
- D1566 Terminology Relating to Rubber
- D2137 Test Methods for Rubber Property—Brittleness Point of Flexible Polymers and Coated Fabrics
- D2240 Test Method for Rubber Property—Durometer Hardness

NOTE 3—For more information about wastewater structures, see Specification C913.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee C13 on Concrete Pipe and is the direct responsibility of Subcommittee C13.06 on Manholes and Specials.

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