



Designation: C877M – 16

Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections (Metric)¹

This standard is issued under the fixed designation C877M; 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 external sealing bands to be used in conjunction with concrete pipe as defined in Terminology C822 and conforming to Specifications C14M, C76M, C412M, C478M, C506M, C507M, C655M, C985M, C1417M, and C1433M.

1.1.1 Type I, Rubber and Mastic Bands.

1.1.2 Type II, Plastic Film and Mesh Reinforced Mastic Bands.

1.1.3 Type III, Chemically Bonded Adhesive Butyl Bands.

1.2 This specification is the metric counterpart of Specification C877.

NOTE 1—This specification covers only the design and material of the sealing bands. Sealing bands covered by this specification are adequate, when properly installed, for external hydrostatic pressures up to 90 kPa, (9.14 m) without leakage. The amount of infiltration or exfiltration flow in an installed pipeline is dependent upon many factors other than the sealing bands; allowable quantities and suitable testing of the installed pipeline and system must be covered by other specifications.

2. Referenced Documents

2.1 *ASTM Standards:*²

A167 Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip (Withdrawn 2014)³

C14M Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe (Metric)

C76M Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (Metric)

C412M Specification for Concrete Drain Tile (Metric)

C478M Specification for Circular Precast Reinforced Con-

crete Manhole Sections (Metric)

C506M Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe (Metric)

C507M Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (Metric)

C655M Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe (Metric)

C681 Test Method for Volatility of Oil- and Resin-Based, Knife-Grade, Channel Glazing Compounds

C822 Terminology Relating to Concrete Pipe and Related Products

C985M Specification for Nonreinforced Concrete Specified Strength Culvert, Storm Drain, and Sewer Pipe (Metric)

C1417M Specification for Manufacture of Reinforced Concrete Sewer, Storm Drain, and Culvert Pipe for Direct Design (Metric)

C1433M Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers (Metric)

D36 Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)

D217 Test Methods for Cone Penetration of Lubricating Grease

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

D570 Test Method for Water Absorption of Plastics

D573 Test Method for Rubber—Deterioration in an Air Oven

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

D882 Test Method for Tensile Properties of Thin Plastic Sheeting

D903 Test Method for Peel or Stripping Strength of Adhesive Bonds

D1171 Test Method for Rubber Deterioration—Surface Ozone Cracking Outdoors (Triangular Specimens)

D1278 Test Methods for Rubber from Natural Sources—Chemical Analysis

D1682 Test Method for Breaking Load and Elongation of Textile Fabric (Withdrawn 1992)³

¹ This specification is under the jurisdiction of ASTM Committee C13 on Concrete Pipe and is the direct responsibility of Subcommittee C13.08 on Joints for Precast Concrete Structures.

Current edition approved Dec. 15, 2016. Published January 2017. Originally approved in 1980. Last previous edition approved in 2009 as C877M – 02 (2009). DOI: 10.1520/C0877M-16.

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 The last approved version of this historical standard is referenced on www.astm.org.