



Designation: C877 – 16

Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections¹

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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 [C14](#), [C76](#), [C412](#), [C478](#), [C506](#), [C507](#), [C655](#), [C985](#), [C1417](#), and [C1433](#).

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 inch-pound companion to Specification C877M; therefore, no SI equivalents are presented in the specification.

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 13 psi, (30 ft) 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[A167](#) Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip (Withdrawn 2014)³

[C14](#) Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe

[C76](#) Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

[C412](#) Specification for Concrete Drain Tile

[C478](#) Specification for Circular Precast Reinforced Concrete Manhole Sections

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.

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

[C506](#) Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe

[C507](#) Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe

[C655](#) Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe

[C681](#) Test Method for Volatility of Oil- and Resin-Based, Knife-Grade, Channel Glazing Compounds

[C822](#) Terminology Relating to Concrete Pipe and Related Products

[C985](#) Specification for Nonreinforced Concrete Specified Strength Culvert, Storm Drain, and Sewer Pipe

[C1417](#) Specification for Manufacture of Reinforced Concrete Sewer, Storm Drain, and Culvert Pipe for Direct Design

[C1433](#) Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers

[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