



Designation: C425 – 04 (Reapproved 2013)

Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings¹

This standard is issued under the fixed designation C425; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers materials and test requirements for compression joints for vitrified clay pipe and fittings. See Specification C700 for pipe specifications. The test requirements are applicable to pipe joint assemblies prior to field installation of pipe.

NOTE 1—Install pipe in accordance with Practice C12.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 The following precautionary caveat pertains only to the Test Requirements portion, Section 7, of this standard. *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.*

2. Referenced Documents

2.1 ASTM Standards:²

A167 Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

A240/A240M Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

C12 Practice for Installing Vitrified Clay Pipe Lines

C700 Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated

C896 Terminology Relating to Clay Products

D395 Test Methods for Rubber Property—Compression Set

D412 Test Methods for Vulcanized Rubber and Thermoplas-

tic Elastomers—Tension

D471 Test Method for Rubber Property—Effect of Liquids

D518 Test Method for Rubber Deterioration—Surface Cracking (Withdrawn 2007)³

D543 Practices for Evaluating the Resistance of Plastics to Chemical Reagents

D573 Test Method for Rubber—Deterioration in an Air Oven

D583 Methods of Test for Water Resistance of Textile Fabrics (Withdrawn 1971)³

D1149 Test Methods for Rubber Deterioration—Cracking in an Ozone Controlled Environment

D1566 Terminology Relating to Rubber

D2240 Test Method for Rubber Property—Durometer Hardness

3. Terminology

3.1 *Definitions*—Terms relating to plastics and rubber shall be as defined in Terminologies D583 and D1566, respectively.

3.2 Terminology C896 can be used for clarification of terminology in this specification.

4. Principles of Joint Design

4.1 Sealing elements shall be compressed between bearing surfaces to assure watertight integrity as required in Section 7.

4.2 Sealing elements shall either be bonded to bearing surfaces or be independent elements.

5. Materials and Manufacture

5.1 Rubber ring-sealing elements shall conform to the requirements of Table 1.

5.2 Rubber for other than ring-sealing elements shall conform to the requirements of Table 2.

5.3 Plastic components shall conform to the requirements of Table 3.

5.4 Metallic components shall be of corrosion-resistant metal conforming to Specifications A167 and A240/A240M.

¹ This specification is under the jurisdiction of ASTM Committee C04 on Vitrified Clay Pipe and is the direct responsibility of Subcommittee C04.20 on Methods of Test and Specifications.

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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.