



Designation: C 663 – 98

Standard Specification for Asbestos-Cement Storm Drain Pipe¹

This standard is issued under the fixed designation C 663; 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 asbestos-cement pipe intended for use in storm-water drainage of highways, airports, farms, foundations, and other similar drainage systems.

1.2 The values stated in SI units are to be regarded as the standard. The values stated in parentheses are for information only.

1.3 *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.* See Note 2 for a specific hazard statement.

2. Referenced Documents

2.1 ASTM Standards:

C 150 Specification for Portland Cement²

C 458 Test Method for Organic Fiber Content of Asbestos-Cement Products³

C 500 Test Methods for Asbestos-Cement Pipe³

C 595 Specification for Blended Hydraulic Cements²

D 2946 Terminology for Asbestos and Asbestos-Cement Products³

2.2 Federal Standard:

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)⁴

2.3 Military Standard:

MIL-STD-129 Marking for Shipment and Storage⁴

2.4 Other Standards:

Uniform Freight Classification Rules⁵

National Motor Freight Classification Rules⁶

3. Terminology

3.1 Definitions:

¹ This specification is under the jurisdiction of ASTM Committee C-17 on Fiber-Cement Products and is the direct responsibility of C17.03 on Asbestos-Cement Products.

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² *Annual Book of ASTM Standards*, Vol 04.01.

³ *Annual Book of ASTM Standards*, Vol 04.05.

⁴ Available from Standardization Documents Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094 Attn: NPODS.

⁵ Available from the Uniform Classification Commission, Room 1106, 222 S. Riverside Plaza, Chicago, IL 60606.

⁶ Available from National Motor Freight Inc., 1616 “P” St. NW, Washington, DC 20036.

3.1.1 *coupling, n*—in asbestos-cement conduit, sewer, underdrain and storm drain pipe—component made from a larger diameter pipe of the same type or class, or of Type II and a higher class, or produced otherwise to yield at least equal performance, for joining asbestos-cement pipe that when properly installed, forms a silt-tight joint, allows alignment corrections and slight changes in direction, and provides an assembled joint equivalent in serviceability and strength to the pipe sections. Alternatively, for storm drain couplings, plastic sleeves that, when properly installed develop sufficient tightness to prevent the surrounding soil from entering the drain, may be used as couplings.

3.1.2 *lot, n*—for pipe sizes 525 mm (21 in.) in diameter and smaller, each 300 lengths of pipe or less, of identical class and sized manufactured on each machine during a 24-h period. For pipe larger than 525 mm (21 in.), each 300 lengths of pipe or less, of identical class and size manufactured on each machine during a period of consecutive working days not exceeding seven days.

3.1.3 Additional terminology is given in Terminology D 2946.

4. Classification

4.1 The types of pipe shall be shown as Type I and Type II corresponding to the chemical requirements given in 10.1.

4.2 Asbestos-cement storm drain pipe furnished under this specification shall be designated as Class II, III, 2500D, IV, and V. The corresponding strength requirements are prescribed in Table 1. The D₁ load is the crushing test load expressed in newtons per linear metre per of diameter. (The D load is the crushing test load expressed in pounds-force per linear ft per ft of diameter.) The pipe shall be furnished in 10, 15, 20, 25, 30, 36, 38, 41, 46, 51, 53, 61, 69, 76, 84, 91, 99 and 107-cm sizes (4, 6, 8, 10, 12, 14, 15, 16, 18, 20, 21, 24, 27, 30, 33, 36, 39 and 42-in. sizes).

5. Materials and Manufacture

5.1 Asbestos-cement storm drain pipe shall be composed of an intimate mixture of portland cement or portland blast-furnace slag cement meeting Specification C 150 or portland slag or pozzolan cements conforming to Specification C 595. The mixture shall not contain more than 0.2 % of non-deleterious organic components as determined by Test Method C 458. The material shall be of laminar construction formed