



Standard Test Methods for Asbestos-Cement Pipe¹

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^{ε1} NOTE—Units information was editorially corrected in January 2012.

1. Scope

1.1 These test methods cover the testing of asbestos-cement pipe for hydrostatic strength, flexural strength, crushing strength, straightness, and uncombined calcium hydroxide; they are for use in conjunction with the individual product specifications for asbestos-cement pipe.

1.2 Test methods appear in the following sections:

	Section
Hydrostatic Pressure Test	4
Flexural Test	5
Crushing Test	6
Straightness Test	7
Uncombined Calcium Hydroxide Test	8

1.3 Guidelines for internal and external corrosion included in Section 9 serve as an aid in determining the type of pipe which should be specified to maximize service life for a particular application.

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.5 **Warning**—Breathing of asbestos dust is hazardous. Asbestos and asbestos products present demonstrated health risks for users and for those with whom they come into contact. In addition to other precautions, when working with asbestos-cement products, minimize the dust that results. For information on the safe use of chrysotile asbestos, refer to “Safe Use of Chrysotile Asbestos: A Manual on Preventive and Control Measures.”²

1.6 *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 appro-*

priate safety and health practices and determine the applicability of regulatory limitations prior to use. For a specific safety hazard, see 1.5.

2. Referenced Documents

2.1 *ASTM Standards:*³

D1067 Test Methods for Acidity or Alkalinity of Water

D1126 Test Method for Hardness in Water

D2946 Terminology for Asbestos and Asbestos-Cement Products

E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

E200 Practice for Preparation, Standardization, and Storage of Standard and Reagent Solutions for Chemical Analysis

2.2 *BNQ Standard:*

BNQ 3807-098 Vulcanized Rubber: Hardness Determination⁴

2.3 *Other Standard:*

Regulation No. 3, Formula for Completely and Specifically Denatured Alcohol⁵

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *crushing strength*—a property of solid material that indicates its ability to withstand collapse from external compressive loads.

3.1.1.1 *Discussion*—Consider failure of the crushing test to have taken place when, as a result of application of the crushing load to the pipe during the test, a break occurs in the pipe before reaching the minimum crushing load designated in the specification.

3.1.2 *flexural strength*—the ability of a standard pipe longitudinal section to withstand external loads that bear on the pipe transversely to its longitudinal axis and induce bending.

¹ These test methods are under the jurisdiction of ASTM Committee C17 on Fiber-Reinforced Cement Products and are the direct responsibility of Subcommittee C17.03 on Asbestos - Cement Sheet Products and Accessories.

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² Available from The Asbestos Institute, http://www.chrysotile.com/en/sr_use/manual.htm.

³ 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.

⁴ Bureau de Normalisation du Québec, Department of Industry and Commerce, 50 St. Joseph St. East, Quebec, QC, Canada G1K 3A5.

⁵ Published by the US Treasury Department, Bureau of Industrial Alcohol, Washington, DC.