



Standard Test Method for Wet Volume of Asbestos¹

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1. Scope

1.1 This test method covers the appraisal of asbestos fiber groups 4 to 7 (see [Note 1](#)) in terms of their occupied volumes when immersed in water.

NOTE 1—Quebec Standard designation of chrysotile asbestos grades as determined by Test Method [D3639/D3639M](#).

1.2 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.

1.3 **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

1.4 *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.* For a specific hazard warning, see [1.3](#).

2. Referenced Documents

2.1 *ASTM Standards:*³

[D1193 Specification for Reagent Water](#)

[D2590/D2590M Test Method for Sampling Chrysotile Asbestos](#)

[D2946 Terminology for Asbestos and Asbestos-Cement Products](#)

[D3639/D3639M Test Method for Classification of Asbestos by Quebec Standard Test](#)

[D3879 Test Method for Sampling Amphibole Asbestos \(Withdrawn 2009\)](#)⁴

[E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods](#)

2.2 *Other Standard:*

[Quebec Standard Designation of Chrysotile Asbestos Grades](#)⁵

3. Terminology

3.1 *Definitions*—Refer to Terminology [D2946](#).

4. Summary of Test Method

4.1 A test specimen is dispersed in water by means of a mechanically driven inverter. The resulting suspension is then allowed to stand for a fixed period, and the volume occupied by the fiber, as defined by the solid-liquid interface, is recorded.

5. Significance and Use

5.1 Wet volume gives an indication of the degree of loftiness and openness of asbestos fiber.

6. Apparatus

6.1 *Graduated Glass Cylinder*—Meeting the following specification, as shown in [Fig. 1](#):

6.1.1

Capacity	2 dm ³ [2000 cm ³]
Subdivisions	0.02 dm ³ [20 cm ³]
Inside diameter	80 mm
Wall thickness	3 mm
Total height	482 ± 3 mm
Height from inner bottom of base to the 2000 cm ³ mark	398 ± 6 mm

6.1.2 The cylinder must have a full-width mouth reinforced with an exterior beaded rim, without any spout.

6.1.3 The bottom of the graduated cylinder must be flat and must form a clean right angle with the wall of the graduate.

¹ This test method is under the jurisdiction of ASTM Committee C17 on Fiber-Reinforced Cement Products and is 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 The last approved version of this historical standard is referenced on www.astm.org.

⁵ Available from the Asbestos Institute, 1130 Sherbrooke St. West, Ste. 410, Montreal, QC Canada H3A 2M8.