Designation: D5385/D5385M – 25

Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes[1]

This standard is issued under the fixed designation D5385/D5385M; 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.

1. Scope

1.1 This test method measures the hydrostatic resistance of a waterproofing membrane under controlled laboratory conditions. This test method is not suitable for systems that rely on confinement of the seams by the backfill since backfill is not part of this test method.

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 nonconformance with the standard.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C192/C192M Practice for Making and Curing Concrete Test Specimens in the Laboratory

D1079 Terminology Relating to Roofing and Waterproofing

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms used in this test method, refer to Terminology D1079.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *post-applied membrane, n*—a membrane that is installed on a previously installed substrate.

3.2.2 *post-formed crack*—a crack that forms and widens behind the waterproofing membrane after it has been applied and cured.

3.2.3 *pre-applied membrane, n*—a membrane that is installed before the creation of the substrate it is intended to protect from passage of water.

3.2.3.1 *Discussion*—Pre-applied membrane is often referred to as blind side membrane.

4. Significance and Use

4.1 This test method tests the hydrostatic resistance of a waterproofing membrane and can be used to compare the hydrostatic resistance of waterproofing membranes. It includes two specimen preparation procedures, one for post-applied membranes and one for pre-applied membranes.

4.2 No correlation has been established between the performance in this test method and that in the field.

5. Apparatus

5.1 *Hydrostatic Testing Equipment,* including a chamber (Fig. 1), a clamping bracket (Fig. 2), and the gasket and fasteners to form the completed assembly (Fig. 3).

5.2 *Conditioning Room,* with forced-air circulation, large enough to condition, prepare, and test specimens while maintaining temperature within a maximum variation of ±2 °C [±4 °F].

5.3 *Source of Compressed Air,* with pressure up to 690 kPa [100 psi] and with an air pressure controller to regulate the air in 103 kPa [15 psi] increments.

5.4 *Cut-Off Saw,* equipped with a diamond or masonry blade, to prepare precast concrete blocks for testing substrates.

5.5 *Silicone Vacuum Grease.*

5.6 *Precast Concrete Patio Blocks* (for use with post-applied membranes), 2000 kg/m^3 [125 lb/ft^3] minimum density, 14.5 MPa [2100 psi] minimum compressive strength,

[1] This test method is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.22 on Waterproofing and Dampproofing Systems.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

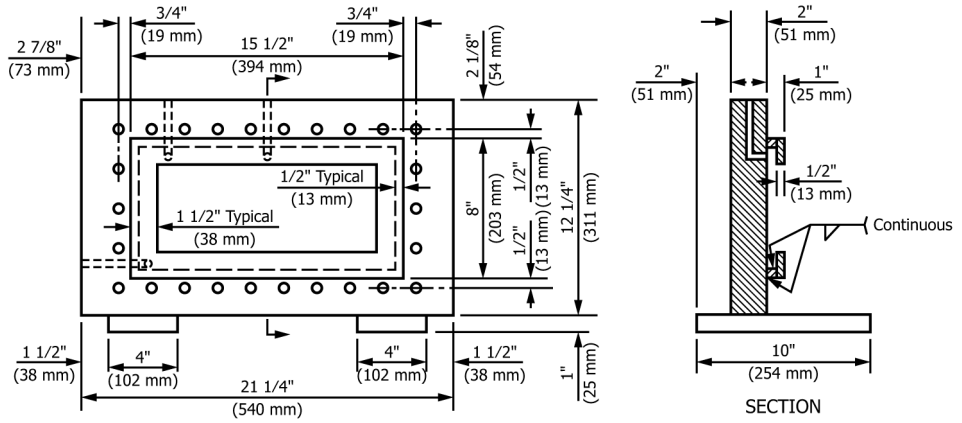

FIG. 1 Chamber

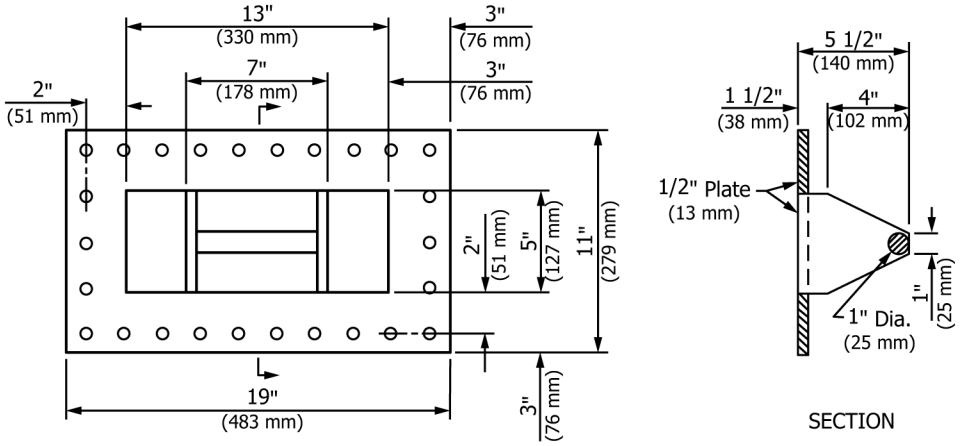

FIG. 2 Clamping Bracket

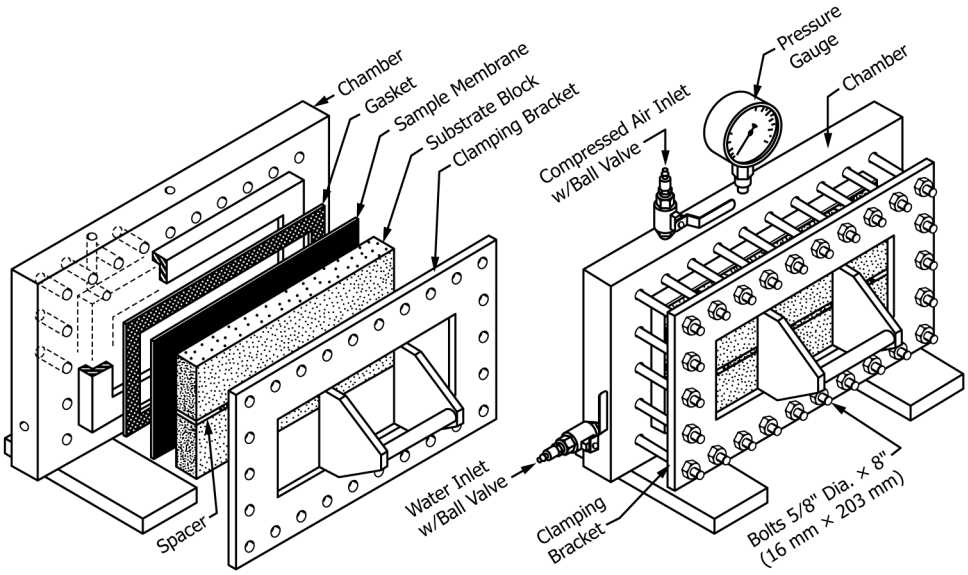

FIG. 3 Completed Assembly

smooth surfaced, 191 ± 12 by 394 ± 12 by 57 ± 6 mm [7½ ± ½ by 15½ ± ½ by 2¼ ± ¼ in.].