



Designation: C1305/C1305M – 16

Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane¹

This standard is issued under the fixed designation C1305/C1305M; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This test method covers a laboratory procedure for determining the ability of a waterproofing membrane to bridge a crack in the substrate.

1.2 There are no ISO standards similar or equivalent to this ASTM standard.

1.3 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.

1.4 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*²

- C33/C33M Specification for Concrete Aggregates
- C150/C150M Specification for Portland Cement
- C717 Terminology of Building Seals and Sealants
- C1375 Guide for Substrates Used in Testing Building Seals and Sealants

3. Terminology

3.1 *Definitions*—Refer to Terminology C717 for definitions of technical terms used in this test method.

4. Summary of Test Method

4.1 This test method consists of casting five specimens of membrane on mortar substrates containing a preexisting crack

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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.

and allowing them to age 14 days at standard conditions followed by seven days in an air-circulating oven at 70°C [158°F], placing them in a test machine, and subjecting the assembly to ten cycles of movement.

5. Significance and Use

5.1 This test method is used to indicate a waterproofing membrane's ability to maintain its integrity while bridging a preexisting crack in the substrate at low ambient temperatures, when the membrane is least likely to be flexible.

6. Comparison to Other Standards

6.1 The committee with jurisdiction over this standard is not aware of any comparable standards published by other organizations.

7. Apparatus and Materials

7.1 *Automatic Extension and Compression Machine*, with cold box capable of maintaining $-26 \pm 1^\circ\text{C}$ [$-15 \pm 2^\circ\text{F}$].

7.2 *Circulating Hot-Air Oven*.

7.3 *Portland Cement*, high early strength conforming to Specification C150/C150M, Type III.

7.4 *Fine Aggregate*, conforming to Specification C33/C33M.

7.5 *Aluminum Angles*, 75 by 50 by 25 mm [3 by 2 by 1 in.], if needed.

7.6 *Epoxy Cement*, or gun-grade construction mastic, if needed.

7.7 *Masking Tape*.

7.8 *Molds*, six, 50 by 25 by 25 mm [2 by 1 by 1 in.] inside dimensions, or 75 by 88 by 25 mm [0.5 by 1.5 by 1 in.] notches in either side, as shown in Fig. 1, for casting mortar blocks.

8. Preparation of Substrates

8.1 Prepare mortar blocks in sizes required for testing in accordance with the requirements in Guide C1375.