



Designation: C 1305 – 00

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

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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 The values stated in SI units are to be regarded as the standard. The inch-pound units given 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.*

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

2. Referenced Documents

2.1 *ASTM Standards:*

C 33 Specification for Concrete Aggregates²

C 150 Specification for Portland Cement³

C 717 Terminology of Building Seals and Sealants⁴

3. Terminology

3.1 *Definitions*—Refer to Terminology C 717 for definitions of technical terms used in this test method. Some of these are *elastomeric, substrate, waterproofing, and compound.*

4. Summary of Test Method

4.1 This test method consists of casting five specimens of membrane on mortar substrates containing a preexisting crack 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 C 150, Type III.

7.4 *Fine Aggregate*, conforming to Specification C 33.

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 Mix 1 part by weight of Type III Portland cement with 2 parts by weight of fine aggregate and stir in approximately 0.7 part by weight of water to produce a uniform mixture.

8.2 Pour the mixture into the mold and allow to cure one day at 100 % relative humidity followed by six days in tap water, both at standard temperature.

NOTE 1—Prepare five sets of two blocks.

¹ This test method is under the jurisdiction of ASTM Committee C-24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.80 on Building Deck Waterproofing Systems.

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² *Annual Book of ASTM Standards*, Vol 04.02.

³ *Annual Book of ASTM Standards*, Vol 04.01.

⁴ *Annual Book of ASTM Standards*, Vol 04.07.