



Designation: C 488 – 83 (Reapproved 1998)

## Standard Test Method for Conducting Exterior Exposure Tests of Finishes for Thermal Insulation<sup>1</sup>

This standard is issued under the fixed designation C 488; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This test method covers out-of-doors exposure testing of finishes that are normally field-applied to thermal insulation which may include joints or joint sealants, or both. Such exposure may be essential prior to the determination of certain physical properties. This test method may also indicate compatibility problems between the joint sealant and the finish as well as the ability of the finish to span a dry joint. This test method is not intended to evaluate mildew resistance, efflorescence, or chemical resistance.

NOTE 1—For testing free plastic films, see Practice D 1435.

1.2 This test method does not prescribe the method of application, test duration, or inspection intervals.

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 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are provided for information only.

### 2. Referenced Documents

#### 2.1 ASTM Standards:

C 168 Terminology Relating to Thermal Insulating Materials<sup>2</sup>

D 1435 Practice for Outdoor Weathering of Plastics<sup>3</sup>

### 3. Terminology

3.1 *Definitions:* Terminology C 168 applies to the terms used in this test method.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee C-16 on Thermal Insulation and is the direct responsibility of Subcommittee C16.33 on Thermal Insulation Finishes and Vapor Transmission.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.06.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 08.01.

### 4. Summary of Test Method

4.1 This test method specifies out-of-doors exposure, under ambient conditions, of field-applied finishes on thermal insulations, utilizing a minimum of three test specimens and one control specimen stored indoors.

### 5. Significance and Use

5.1 Both physical and chemical changes may occur from weather exposure, and these changes affect performance properties, service life, and maintenance schedules. For this reason, tests of properties relating to performance should be made both before and after specific periods of outdoor exposure.

5.2 This test method recognizes that differing geographical locations, environmental conditions, differences between surface temperatures and ambient temperatures, and test durations may have extremely varied effects upon the test results.

5.3 This test method is to be used for comparative qualitative testing.

### 6. Test Specimens

6.1 A minimum of three test specimens and one control specimen, each having been applied to an insulation base of minimum dimensions 1 by 6 by 12 in. (25 by 150 by 300 mm), shall be prepared. Insulation shall be the same as that which is proposed for the application. The control specimen shall be stored indoors.

6.2 The following types of specimens may be prepared:

6.2.1 Thermal insulation with no joints,

6.2.2 Thermal insulation with dry joints, and

6.2.3 Thermal insulation with joints filled with joint sealant.

6.3 For testing compatibility of sealants with finishes, joints at least 1 in. (25 mm) deep by  $\frac{1}{16}$  to  $\frac{3}{16}$  in. (2 to 5 mm) wide by 12 in. (300 mm) long may be cut in the insulation block. Joints shall be at least 4 in. (100 mm) apart and at least 4 in. (100 mm) from the edges, parallel to the joint. More than one sealant may be tested with a single finish by varying the sealant in each successive joint. These individual insulation pieces may be adhered with a suitable adhesive to a larger slab of the same insulation of dimensions of the desired completed specimen size in order to form a stable base for the specimen.