



Designation: C 1248 – 93 (Reapproved 1998)

## Standard Test Method for Staining of Porous Substrate by Joint Sealants<sup>1</sup>

This standard is issued under the fixed designation C 1248; 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 an accelerated laboratory procedure to determine if a joint sealant has a probability of staining a porous substrate (such as marble, limestone, sandstone, and granite).

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety problems, 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:*

C 717 Terminology of Building Seals and Sealants<sup>2</sup>

G 53 Practice for Operating Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Non-Metallic Materials<sup>3</sup>

### 3. Terminology

3.1 *Definitions:*

3.1.1 Refer to Terminology C 717 for definitions of the following terms used in this test method: *bead; compound; cure; elastomer; joint; primer; sealant; self leveling sealant; and substrate.*

### 4. Summary of Test Method

4.1 This test method consists of subjecting standard joint specimens to various exposure treatments as follows: (a) all specimens are compressed and clamped at the manufacturer's rated movement capability; (b) one-third of the specimens are stored at standard conditions while under compression for up to 28 days; (c) one-third of the specimens are exposed in an oven while under compression for up to 28 days; and (d) one-third

of the specimens are exposed in an ultraviolet (UV) fluorescent test chamber while under compression for up to 28 days.

4.2 The effects of the test are evaluated by visual inspection for changes in surface appearance and average measurements of any stain depth and stain width.

4.3 This test method is applicable to any type of elastomeric joint sealant and any type of porous substrate.

### 5. Significance and Use

5.1 Staining of building materials is an aesthetically undesirable occurrence. This test method evaluates the likelihood of a sealant causing an early stain on a porous substrate due to exudation of materials from the sealant. Since this is an accelerated test, it does not necessarily predict that the tested sealants will not stain or discolor porous substrates over longer periods of time.

### 6. Apparatus

6.1 *Forced-Draft Oven.*

6.2 *Ultraviolet Chamber*, conforming to Practice G 53 and UVA 340 type bulbs.

6.3 *"C" Clamps*, or other device for maintaining the specimens under compression.

6.4 *TFE-Fluorocarbon Spacers.*

6.5 *Masking Tape.*

### 7. Test Specimens

7.1 Substrates shall be 25 by 25 by 75 mm (1 by 1 by 3 in.). A total of 24 substrates are required to make the twelve test specimens.

NOTE 1—The precision and bias statement is based on Vermont white marble and Bethel white granite substrates.

7.2 *Primers*—When a primer is recommended by the sealant manufacturer, apply the primer to one substrate block of each test specimen. Apply the primer where the sealant will be in contact with the substrate.

7.3 *Preparation of Test Specimens:*

7.3.1 Standard conditions of temperature and relative humidity used throughout this test method are defined as  $23 \pm 2^\circ\text{C}$  ( $73.4 \pm 3.6^\circ\text{F}$ ) and  $50 \pm 5\%$ , respectively.

7.3.2 *Multi-Component Sealants*—Prepare twelve test specimens for each substrate that is to be used in the test. After maintaining the unopened sample for at least 24 h at standard

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee C-24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.40 on Weathering.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.07.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 14.02.