



Standard Practice for Outdoor Weathering of Construction Seals and Sealants¹

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1. Scope

1.1 This practice describes outdoor exposure procedures used to determine the weathering durability of building construction, seals and sealants.

NOTE 1—See Practice G 24 for Exposures to Daylight Filtered Through Glass.

1.2 This practice is limited to the method by which the construction seals or sealants are exposed to outdoor weathering as part of a test program. It does not describe the test methods to be performed following the outdoor exposure. It is intended for specimens of any size and shape to be used in static or dynamic tests.

1.3 Means of evaluation of the effects of weathering will depend on the intended use for the test material.

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

1.5 *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

- C 717 Terminology of Building Seals and Sealants
- D 1150 (discontinued 1992) Form for Recording Results of Exposure Tests on Paint
- E 772 Terminology Relating to Solar Energy Conversion
- G 7 Practice for Atmospheric Environmental Exposure Testing of Nonmetallic Materials
- G 24 Practice for Conducting Exposures to Daylight Filtered Through Glass
- G 84 Practice for Measurement of Time-of Wetness on

Surfaces Exposed to Wetting Conditions as in Atmospheric Corrosion Testing

G 113 Terminology Relating to Natural and Artificial Weathering Tests of Nonmetallic Materials

G 141 Guide for Addressing Variability in Exposure Testing on Nonmetallic Materials

G 147 Practice for Conditioning and Handling of Nonmetallic Materials for Natural and Artificial Weathering Tests

G 178 Practice for Determining the Activation Spectrum of a Material (Wavelength Sensitivity to an Exposure Source) Using the Sharp Cut-On Filter or Spectrographic Technique

3. Terminology

3.1 *Definitions*—Definitions are found in Terminologies C 717, G 113, and E 772.

4. Significance and Use

4.1 Tests conducted in accordance with this practice are used to evaluate the stability of construction seals and sealant materials when they are exposed to outdoor weather conditions. The durability of seals and sealants in actual outdoor use can be very different depending on the location, because of differences in solar radiation, moisture, temperature, pollutants, and other factors. Sealant color may also affect durability.

4.2 The type, frequency and amount of movement of sealants varies with location and may affect durability. It cannot be assumed, therefore, that results from one exposure in a single location will be useful for determining durability in a different location. Exposures in several locations with different climates (for example, solar radiation, moisture, temperature, pollutants, biological and other factors) that represent a broad range of anticipated service conditions are recommended.

4.3 It is strongly recommended that control materials with known durability should be included with each exposure test. Control materials should be exposed along with the test specimens for the purpose of comparing the performance of test materials to the controls. It is preferable to use two control materials of similar composition and construction to the test specimens, one with relatively good durability and one with relatively poor durability. Unless otherwise specified, use at least three replicate specimens of each test and control material.

¹ This practice is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.20 on General Sealants Subcommittee.

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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.