



Designation: C1589/C1589M – 17b

Standard Practice for Outdoor Weathering of Construction Seals and Sealants¹

This standard is issued under the fixed designation C1589/C1589M; 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 practice describes outdoor exposure procedures to be used as part of a test designed to determine the weatherability of building construction, seals and sealants.

NOTE 1—See Practice G24 for Exposures to Daylight Filtered Through Glass.

1.2 This practice includes three procedures for outdoor weathering. Procedure A exposes specimens to outdoor weathering without movement. Procedure B and Procedure C are, respectively, continuous natural and periodic manual techniques for subjecting specimens to the combination of cyclic movement and exposure to outdoor weathering.

1.3 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 refers to the types of evaluations to be performed following the outdoor exposure but does not describe the test methods.

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

1.5 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.

1.6 *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.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This practice is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.40 on Weathering.

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2. Referenced Documents

2.1 ASTM Standards:²

C717 Terminology of Building Seals and Sealants

C719 Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle)

C1135 Test Method for Determining Tensile Adhesion Properties of Structural Sealants

C1735 Test Method for Measuring the Time Dependent Modulus of Sealants Using Stress Relaxation

E631 Terminology of Building Constructions

E772 Terminology of Solar Energy Conversion

G7 Practice for Atmospheric Environmental Exposure Testing of Nonmetallic Materials

G24 Practice for Conducting Exposures to Daylight Filtered Through Glass

G84 Practice for Measurement of Time-of-Wetness on Surfaces Exposed to Wetting Conditions as in Atmospheric Corrosion Testing

G113 Terminology Relating to Natural and Artificial Weathering Tests of Nonmetallic Materials

G147 Practice for Conditioning and Handling of Nonmetallic Materials for Natural and Artificial Weathering Tests

G169 Guide for Application of Basic Statistical Methods to Weathering Tests

G178 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 C717, G113, E631, and E772.

4. Significance and Use

4.1 Tests conducted in accordance with this practice are used to evaluate the weatherability of construction seals and sealant materials when they are exposed to outdoor weather conditions. The weatherability of seals and sealants in actual

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.