



Designation: ~~D4799/D4799M – 08 (Reapproved 2013)~~^{ε1} D4799/D4799M – 17

Standard Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Fluorescent UV, Water Spray, and Condensation Method)¹

This standard is issued under the fixed designation D4799/D4799M; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

^{ε1} NOTE—Units information was editorially corrected in July 2013.

1. Scope

1.1 This practice describes test conditions and procedures for fluorescent UV and condensation exposures conducted according to Practices [G151](#) and [G154](#) for bituminous roofing and waterproofing materials that have a minimum softening point of approximately 95°C [200°F] as determined by Test Method materials. (See [D36](#). (Also see Terminology [G113](#).)

1.2 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.

1.3 *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 *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.*

2. Referenced Documents

2.1 ASTM Standards:²

[D36/D36M](#) Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)

[D1669/D1669M](#) Practice for Preparation of Test Panels for Accelerated and Outdoor Weathering of Bituminous Coatings

[D1670/D1670M](#) Test Method for Failure End Point in Accelerated and Outdoor Weathering of Bituminous Materials

[G113](#) Terminology Relating to Natural and Artificial Weathering Tests of Nonmetallic Materials

[G141](#) Guide for Addressing Variability in Exposure Testing of Nonmetallic Materials

[G147](#) Practice for Conditioning and Handling of Nonmetallic Materials for Natural and Artificial Weathering Tests

[G151](#) Practice for Exposing Nonmetallic Materials in Accelerated Test Devices that Use Laboratory Light Sources

[G154](#) Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

3. Summary of Test Method

3.1 Thin films of bitumen are uniformly applied to aluminum panels. Shingles and similar materials are cut to size and exposed to specified cycles of temperature, light, and water. A choice of ~~three~~^{six} test cycles is given along with options for determining the period of exposure and evaluating results.

4. Significance and Use

4.1 This weathering apparatus is used for comparing the weathering characteristics of bituminous materials against a control material for which the outdoor weathering characteristics are known. It is not possible to establish a precise correlation between

¹ This practice is under the jurisdiction of ASTM Committee [D08](#) on Roofing and Waterproofing and is the direct responsibility of Subcommittee [D08.02](#) on Steep Roofing Products and Assemblies.

Current edition approved July 1, 2013 June 1, 2017. Published July 2013 July 2017. Originally approved in 1988. Last previous edition approved in 2008 2013 as [D4799 – 08](#) [D4799/D4799M – 08](#) (2013)^{ε1}. DOI: 10.1520/D4799 – D4799M-08R13E01.10.1520/D4799_D4799M-17.

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.