



Designation: D1669/D1669M – 07 (Reapproved 2023)

Standard Practice for Preparation of Test Panels for Accelerated and Outdoor Weathering of Bituminous Coatings¹

This standard is issued under the fixed designation D1669/D1669M; 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.

1. Scope

1.1 This practice covers a procedure for the preparation of accelerated and outdoor weathering test panels of bituminous coatings. It is considered suitable for the preparation of film thicknesses in the range from 0.25 to 2.54 mm [0.010 to 0.100 in.].

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 nonconformance 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* (**Warning**—Mercury has been designated by EPA and many state agencies as a hazardous material that can cause central nervous system, kidney, and liver damage. Mercury, or its vapor, may be hazardous to health and corrosive to materials. Caution should be taken when handling mercury and mercury-containing products. See the applicable product Material Safety Data Sheet (MSDS) for details and EPA's website, <http://www.epa.gov/mercury/faq.htm>, for additional information. Users should be aware that selling mercury or mercury-containing products, or both, in your state may be prohibited by state law.)

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.*

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.

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2. Referenced Documents

2.1 ASTM Standards:²

B209/B209M Specification for Aluminum and Aluminum-Alloy Sheet and Plate

D5/D5M Test Method for Penetration of Bituminous Materials

E1 Specification for ASTM Liquid-in-Glass Thermometers

3. Summary of Practice

3.1 Heated bituminous material is poured onto a clean, heated, and masked aluminum panel. Care is taken to remove air bubbles. The bitumen is leveled in a press before solidifying, and the coated panel is then cooled, cleaned, and measured for uniform thickness.

4. Significance and Use

4.1 This practice for preparation of test panels greatly increases the likelihood of achieving reproducible results in subsequent testing.

5. Apparatus

5.1 *Panel*—A supporting metal panel on which the bituminous coating is applied. It shall meet the following requirements:

5.1.1 *Metal, Aluminum or Aluminum Alloy*, as described in Table 2 of Specification B209/B209M under Alloy 3003-H14.³

5.1.2 *Finish*—Mill finish and process cleaned.

5.1.3 *Dimensions*:

5.1.3.1 *Thickness*—0.64 to 1.90 mm [0.025 to 0.075 in.].

5.1.3.2 *Width and Length*—70 by 150 mm [$2\frac{3}{4}$ by $5\frac{7}{8}$ in.] or of a size that will allow a minimum bitumen film area of 50 by 130 mm [2 by $5\frac{1}{8}$ in.].

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.

³ The sole sources of supply of the apparatus (panels) known to the committee at this time are The Q-Panel Company, 26200 First St., Cleveland OH 44145; Atlas Electric Devices Co., 4114 N. Ravenswood Ave., Chicago, IL 60613; Advanced Coating Technologies Inc., 273 Industrial Dr. (PO Box 401), Hillsdale MI 49242. If you are aware of alternative suppliers, please provide this information to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee,¹ which you may attend.