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.

Designation: D228/D228M – 21

Standard Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing[1]

This standard is issued under the fixed designation D228/D228M; 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 These test methods cover procedures for sampling, examination, physical testing, and analyses of asphalt-containing materials used in roofing and waterproofing. These materials include but are not limited to roll roofing, cap sheets, and shingles. Any of these materials is allowed to be partially or fully coated, surfaced, or laminated, or a combination thereof.

1.2 The test methods and procedures in this standard appear in the following order:

Section	Content
6	Types of Roofing
7	Sampling
8	Mass and Area Determination
9	Selection of Representative Specimens
10	Moisture
11	Pliability
12	Mass Loss and Behavior on Heating
13	Tear Strength
14	Fastener Pull-Through Resistance
15	Preparation and Selection of Small Test Specimens for Analyses
16	Analysis of Glass Felt Products
17	Analysis of Roofing Products with Organic Felts
18	Ash of Desaturated Felt
19	Calculation
20	Adjusting Back Coating Fine Mineral Matter and Back Surfacing
21	Report
22	Precision and Bias

1.3 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.

1.4 *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.*

1.5 *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]

D95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation

D146/D146M Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing

D225 Specification for Asphalt Shingles (Organic Felt) Surfaced With Mineral Granules (Withdrawn 2012)[3]

D1079 Terminology Relating to Roofing and Waterproofing

D1922 Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method

D2178/D2178M Specification for Asphalt Glass Felt Used in Roofing and Waterproofing

D2626/D2626M Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing

D3462/D3462M Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules

D3909/D3909M Specification for Asphalt Roll Roofing (Glass Felt) Surfaced With Mineral Granules

D4601/D4601M Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing

D4897/D4897M Specification for Asphalt-Coated Glass-Fiber Venting Base Sheet Used in Roofing

[1] These test methods are under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and are the direct responsibility of Subcommittee D08.02 on Steep Roofing Products and Assemblies.

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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.

[3] The last approved version of this historical standard is referenced on www.astm.org.

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