



Designation: D5147/D5147M – 18 (Reapproved 2024)

Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material¹

This standard is issued under the fixed designation D5147/D5147M; 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 and testing prefabricated, reinforced, polymer-modified bituminous sheet materials designed for single or multiple-ply application in roofing and waterproofing membranes. These products may use various surfacing materials on one side.

1.2 These test methods cover a number of different products. Not all tests are required for every product. Only those called out in the product standard are required.

1.3 These test methods appear in the following order:

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Sampling	4
Conditioning	5
Thickness	6
Load Strain Properties	7
Tear Strength	8
Moisture Content	9
Water Absorption	10
Dimensional Stability	11
Low-Temperature Flexibility	12
Heat Conditioning	13
Accelerated Weathering	14
Granule Embedment	15
Compound Stability	16
Coating Thickness	17
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1.4 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.

1.5 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standard-*

ization 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
- D1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature
- D4073/D4073M Test Method for Tensile-Tear Strength of Bituminous Roofing Membranes
- D4798/D4798M Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method)
- D4977/D4977M Test Method for Granule Adhesion to Mineral-Surfaced Roofing by Abrasion
- D5636/D5636M Test Method for Low-Temperature Unrolling of Felt or Sheet Roofing and Waterproofing Materials
- D5869/D5869M Practice for Dark Oven Heat Exposure of Roofing and Waterproofing Materials
- D6162/D6162M Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements
- D6163/D6163M Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements
- D6164/D6164M Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements
- D6222/D6222M Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcements
- D6223/D6223M Specification for Atactic Polypropylene

¹ These test methods are under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and are the direct responsibility of Subcommittee D08.04 on Felts, Fabrics and Bituminous Sheet Materials.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.