



Designation: D6163/D6163M – 21

Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements¹

This standard is issued under the fixed designation D6163/D6163M; 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 specification covers prefabricated modified bituminous sheet materials with glass fiber reinforcement, with or without granules, that use styrene butadiene styrene (SBS) thermoplastic elastomer as the primary modifier and are intended for use in the fabrication of multiple ply roofing and waterproofing membranes.

1.2 This specification is intended as a material specification only. Issues regarding the suitability of the specific roof constructions or application techniques are beyond this scope.

1.3 The specified tests and property limits used to characterize the sheet materials are intended to establish minimum properties. In-place roof system design criteria, such as fire resistance, field strength, impact/puncture resistance, material compatibility, uplift resistance, and others, are factors beyond the scope of this material specification.

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 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

D1079 Terminology Relating to Roofing and Waterproofing

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is 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 service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

**D5147/D5147M Test Methods for Sampling and Testing
Modified Bituminous Sheet Material**

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology **D1079**.

4. Classifications

4.1 Modified bituminous sheet materials reinforced with glass fiber, Type I, Type II, and Type III are covered by this specification.

4.2 The following grades are used to describe the material surfacing:

4.2.1 Grade *G*—Granule surfaced.

4.2.2 Grade *S*—Smooth surfaced.

5. Material and Manufacture

5.1 In the process of manufacture, the reinforcement is impregnated and coated on both sides with an SBS-modified bituminous coating. The SBS-modified bituminous coating shall be permitted to be compounded with a mineral stabilizer.

5.2 The Grade *G* sheet is surfaced on the weather side with mineral granules, except for any selvage. To prevent sticking in the roll, the reverse side and any selvage shall be permitted to be covered with a fine mineral surfacing or any other surfacing that will not interfere with adhesion or bonding of the lap during application.

5.3 Sheet material intended for application by heat welding (torching) shall meet the minimum bottom coating requirement found in **Table 1**.

6. Physical Properties

6.1 The sheet shall conform to the minimum physical properties prescribed in **Table 2**.

6.2 The finished product shall not crack nor be so sticky as to cause tearing or other material damage upon being unrolled at any product temperature between 4 and 60 °C [40 and 140 °F].

7. Dimensions, Mass, and Permissible Variations

7.1 The finished product shall conform to the following dimensions and variations: