



Designation: D 6163 – 00^{e1}

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

This standard is issued under the fixed designation D 6163; 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.

^{e1} NOTE—Table 2 was editorially corrected in October 2001.

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 SI units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:

D 1079 Terminology Relating to Roofing, Waterproofing, and Bituminous Materials²

D 5147 Test Methods for Sampling and Testing Modified Bituminous Sheet Materials Used in Roofing and Waterproofing²

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology D 1079:

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.04 on Felts and Fabrics.

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² *Annual Book of ASTM Standards*, Vol 04.04.

3.1.1 *elongation at 5 % of maximum load, n*—the elongation measured on the load-elongation curve at which point the load has dropped to 5 % of its maximum value.

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: