



Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements¹

This standard is issued under the fixed designation D 6223; 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 reinforced with a combination of polyester fabric and glass fiber, with or without granules, that use atactic polypropylene (APP) 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 specific roof constructions or application techniques are beyond the scope of this specification.

1.3 The specified tests and property limits used to characterize the sheet materials covered by this specification 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, the need for field applied coatings, 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 inch-pound units given in parentheses are for information only.

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

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 Material²

D 5636 Test Method for Low Temperature Unrolling of Felt or Sheet Roofing and Waterproofing Materials²

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this specification, refer to Terminology D 1079.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *elongation at 5 % of maximum load*— the elongation measured on the load–elongation curve at which point the load has dropped to 5 % of its maximum value.

4. Classification

4.1 Type I and II modified bituminous sheet materials reinforced with a combination of polyester fabric and glass fiber reinforcements, are covered by this specification (see Table 1).

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

4.2.1 *Grade G*—Granule surfacing.

4.2.2 *Grade S*—Smooth surfacing.

5. Material and Manufacture

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

5.2 *Grade G* materials are 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 To prevent sticking in the roll, any selvage will be surfaced with mineral or other surfacing material which will not interfere with adhesion or bonding during application.

6. Physical Properties

6.1 The sheet shall conform to the minimum physical properties prescribed in Table 1.

6.2 The finished product shall not crack or 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).

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.