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Standard Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing¹

This standard is issued under the fixed designation D2626/D2626M; 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.

This standard has been approved for use by agencies of the Department of Defense.

^{ε1} NOTE—Units information was editorially corrected in June 2012.

1. Scope

1.1 This specification covers asphalt-saturated and coated organic felt base sheet with mineral surfacing on the top side, with or without perforations, for use as the first ply of a built-up roof. When not perforated, this sheet is suitable for use as a vapor retarder, with a solid mopping of asphaltic material, under roof insulation or between multiple layers of roof insulation.

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

1.2 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 non-conformance with the standard.

2. Referenced Documents

2.1 ASTM Standards:²

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

D226 Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing

D228 Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing

D1079 Terminology Relating to Roofing and Waterproofing

E96/E96M Test Methods for Water Vapor Transmission of Materials

3. Terminology

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

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *lot*—for the purpose of sampling, a lot shall consist of all material of the same type and size offered for delivery at one time.

4. Materials and Manufacture

4.1 In the process of manufacture, a single thickness of dry organic felt shall be saturated with hot asphalt, coated on both sides with a hot asphaltic material, and surfaced on the top side with mineral surfacing.

4.2 The felt shall be produced principally from organic fibers, or mixtures thereof. The surface of the felt shall be uniform and relatively smooth. Upon splitting or tearing on the bias, the felt shall appear reasonably free of lumps and particles of foreign substances.

4.3 The coating shall be a hot-applied asphalt material permitted to be compounded with a mineral stabilizer.

4.4 The reverse side of the base sheet may be covered with a suitable material to prevent sticking in the roll.

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 and Fabrics.

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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.

5. Physical Properties

5.1 The material shall conform to the physical requirements prescribed in Table 1 and the dimensions and masses prescribed in Table 2 and Table 3. Perforated base sheets shall conform to the same requirements as the plain type but shall also have uniformly spaced perforations.

5.2 The finished product shall not crack nor be so sticky as to cause tearing or other damage upon being unrolled at temperatures between 10 and 60°C (50[50 and 140°F]).

6. Dimensions, Mass, and Permissible Variations

6.1 The material shall conform to the dimensions and masses prescribed in Table 2.

6.2 Perforated material shall also conform to the dimensions and other requirements prescribed in Table 3.

7. Workmanship, Finish, and Appearance

7.1 The felt shall be thoroughly and uniformly saturated, and shall show no unsaturated spots at any point upon cutting 50-mm (2-in.) [2-in.] wide strips at random across the entire width of the sheet and splitting them open for their full length.

7.2 The coating shall be applied uniformly on both sides of the sheet in a continuous, unbroken film that extends to the edges of the sheet. The coating may be smooth or finely veined, but not coarsely veined.

7.3 The mineral surfacing shall be applied uniformly over the entire surface of the top side of the sheet. If soap or other material is used on the reverse side of the sheet, the amount applied shall not be so great as to interfere with adhesion between the base sheet and plying cement. Coarse mica shall not be used on either surface.

7.4 The finished material shall be free of visible defects such as holes, ragged or untrue edges, breaks, cracks, tears, protuberances, and indentations, except for intentionally provided perforations and the associated protuberances.

8. Sampling and Test Methods

8.1 Sample the material and determine the properties enumerated in this specification in accordance with Test Methods D228, unless otherwise indicated.

8.2 *Breaking Strength*—Test Methods D146, Section 13 (Strength).

8.3 *Water Vapor Permeance*—Test Methods E96/E96M, Procedure B.

8.4 *Moisture Content*—Test Methods D146, Section 12 (Moisture).

8.5 *Thickness of Desaturated Felt*—Test Methods D146, Section 21 (Thickness of Felts).

8.6 For perforated base sheet, determine the average venting area in accordance with 8.2 (from the Sampling and Test Methods section) of Specification D226.

9. Inspection

9.1 *Inspection*—Inspection shall be in accordance with the requirements of this specification.

9.2 *Inspection Alternatives*—Alternative inspection requirements shall be determined by and as agreed upon between the purchaser and the supplier.

10. Rejection and Resubmittal

10.1 *Failure to Conform*—Failure to conform to any of the requirements as stated in this specification constitutes grounds for rejection.

10.2 *Rejection Redress*—The supplier shall have the right to inspect the rejected materials. The supplier and the purchaser shall agree to the quantity of rolls deemed unacceptable. The supplier shall then have the right to submit the same number of new rolls as replacement.

TABLE 1 Physical Requirements of Asphalt-Saturated and Coated Base Sheet

Pliability, number of failures, max	2
Behavior on heating	no flowing, sagging, blistering, or absorption of the coating
Average breaking strength, min, kN/m—(lb/in.) width:	
Average breaking strength, min, kN/m [lb/in.] width:	
— with fiber grain	6.1 (35)
— across fiber grain	3.5 (20)
— with fiber grain	6.1 [35]
— across fiber grain	3.5 [20]
Water vapor permeance, at 23°C (73.4°F), — max, ng/Pa·s·m ² (grains/h·ft ² ·in·Hg)	17 (0.3) ^A
Water vapor permeance, at 23°C [73.4°F], — max, ng/Pa·s·m ² [grains/h·ft ² ·in·Hg]	17 [0.3] ^A

^A Test nonperforated sheet only.