



Designation: D 4869 – 88 (Reapproved 1993)^{ε1}

AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Asphalt-Saturated Organic Felt Shingle Underlayment Used in Roofing¹

This standard is issued under the fixed designation D 4869; 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.

^{ε1} NOTE—Keywords were added in May 1993.

1. Scope

1.1 This specification covers asphalt-saturated organic felt shingle underlayment for use as an underlayment with asphalt shingles.

1.2 The values stated in inch-pound units are to be regarded as the standard.

1.3 The following safety hazards caveat pertains only to the test method portion, Section 8, of this specification: *This standard does not purport to address all of the safety problems, 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 146 Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing²

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

D 1922 Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method³

E 96 Test Methods for Water Vapor Transmission of Materials⁴

3. Terminology

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

4. Classification

4.1 Asphalt saturated felts covered by this specification are of two types:

4.1.1 *Type I*—Shingle Underlayment, and

4.1.2 *Type II*—Heavy Duty Shingle Underlayment.

5. Materials and Manufacture

5.1 In the process of manufacture, a single thickness of organic dry felt shall be uniformly saturated with an asphaltic saturant.

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

6. Physical Requirements

6.1 The material shall conform to the physical requirements prescribed in Table 1 and the dimensions and masses prescribed in Table 2.

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

6.3 The finished product shall pass the water shower exposure test described in 8.3, indicating resistance to liquid water transmission.

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 2-in. (50-mm) wide strips at random across the entire sheet and splitting them open for their full length.

7.2 The saturated felt may be surfaced lightly on one side with talc or other finely comminuted mineral material to prevent sticking in the roll.

7.3 The finished material shall be free of visible external defects, such as holes, ragged or untrue edges, breaks, cracks, tears, protuberances, and indentations.

8. Sampling and Test Method

8.1 Sample the material and determine the properties enumerated in this specification in accordance with Test Methods D 146, E 96 (Procedure A), and D1922.

8.2 Determine the saturation percent by dividing the mass of the saturant by the mass of the desaturated (dry) felt, and multiply by 100.

8.3 Determine the resistance to liquid water transmission by the following test method:

8.3.1 *Scope*—The purpose of this test method is to indicate the resistance of the material to transmission of liquid water

¹ This specification is under the jurisdiction of ASTM Committee D-8 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.02 on Prepared Roofings, Shingles, and Siding Materials.

Current edition approved Nov. 25, 1988. Published January 1988.

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

³ *Annual Book of ASTM Standards*, Vol 08.01.

⁴ *Annual Book of ASTM Standards*, Vol 04.06.