



Standard Specification for Bitumen-Saturated Cotton Fabrics Used in Roofing and Waterproofing¹

This standard is issued under the fixed designation D 173; 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. This standard replaces Federal Specification SS-C-450.

1. Scope

1.1 This specification covers woven cotton fabrics saturated with either asphalt or coal-tar pitch intended to be used with asphalts conforming to Specifications D 312 or D 449, coal-tar pitches conforming to Specification D 450, or appropriate solvent bearing bituminous materials in the construction of roofing and waterproofing systems.

1.1.1 Asphalt-saturated cotton fabric shall be used with asphalt base plying cement; typical ones are mopping asphalts conforming to Specifications D 312 or D 449 or appropriate solvent bearing asphaltic compounds.

1.1.2 Coal-tar-saturated cotton fabric shall be used with coal-tar based plying cements; a typical one is coal-tar pitch conforming to Specification D 450 or appropriate solvent bearing coal-tar compounds.

1.2 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:²

D 146 Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing

D 312 Specification for Asphalt Used in Roofing

D 449 Specification for Asphalt Used in Dampproofing and Waterproofing

D 450 Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing

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

D 3775 Test Methods for Fabric Count of Woven Fabric

3. Terminology

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

4. Materials and Manufacture

4.1 In the process of manufacture, the dry cotton fabric shall be thoroughly and uniformly saturated with bitumen. This shall be accomplished by passing the fabric through the saturant or by spraying with saturant, calendering in the presence of heat, and then cooling before winding on a core.

4.2 If fabric with a selvage is used, the selvage shall not be more than 16 mm ($\frac{5}{8}$ in.) wide.

4.3 The fabric shall be woven entirely from cotton fibers, but customary sizing materials not exceeding 8 % by weight of the moisture-free cotton shall be permitted to be used.

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.

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 and 140°F).

6. Workmanship, Finish, and Appearance

6.1 The meshes of the fabric shall not be completely closed or sealed by the process of saturation. There shall be sufficient porosity maintained to allow successive moppings of the plying cement to seep through.

6.2 The surface of the fabric shall not be coated or covered with talc or other substances that would tend to interfere with adhesion between the fabric and the plying cement. The use of silica or wood flour is permissible.

6.3 The surface shall be uniformly smooth and free of irregularities, folds, or knots.

6.4 The finished material shall be free of visible external defects such as ragged or untrue edges, breaks, rents, or cracks.

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.