



Standard Specification for Thermoplastic Fabrics Used in Cold-Applied Roofing and Waterproofing¹

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1. Scope

1.1 This specification covers thermoplastic fabrics such as polyester, polyester/polyamide bicomponent, or composites with fiberglass or polyester scrims that can be used during the construction of cold-applied roofing and waterproofing.

1.2 This specification is intended as a material specification. 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 values used to characterize the respective fabrics are intended to establish minimum properties. In-place system design criteria or performance attributes are factors beyond the scope of this material specification.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parenthesis are for information only.

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles²

D 1079 Terminology Relating to Roofing, Waterproofing, and Bituminous Materials³

D 1117 Test Methods for Nonwoven Fabrics²

D 1776 Practice for Conditioning Textiles for Testing²

D 1777 Test Method for Thickness of Textile Materials²

D 4830 Test Methods for Characterizing Thermoplastic Fabrics Used in Roofing and Waterproofing³

D 5035 Test Method for Breaking Strength and Elongation of Textile Fabrics (Strip Method)⁴

D 5733 Test Method for Tearing Strength of Nonwoven Fabrics by the Trapezoid Procedure⁴

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminologies D 123 and D 1079.

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 D08.04 on Felts and Fabrics for Bituminous Roofing and Waterproofing.

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² *Annual Book of ASTM Standards*, Vol 07.01.

³ *Annual Book of ASTM Standards*, Vol 04.04.

⁴ *Annual Book of ASTM Standards*, Vol 07.02.

4. Classification

4.1 The thermoplastic fabrics covered by this specification are of the following general constructions and compositions. Each is a separate class or type differentiated by the polymer type, combination of polymers, manufacturing process, or some combination thereof.

4.1.1 *Type I*—Polyester spunbonded without resin, unneeded;

4.1.2 *Type II*—Polyester spunbonded without resin, needed;

4.1.3 *Type III*—Polyester mat plus fiber glass scrim with resin;

4.1.4 *Type IV*—Polyester core/polyamide sheath bicomponent spunbonded;

4.1.5 *Type V*—Polyester mat with polyester stitching; and

4.1.6 *Type VI*—Polyester mat plus polyester scrim with resin.

4.1.7 *Type VII*—Polyester scrim fabric with resin.

5. Materials and Manufacture

5.1 The fabric shall be a uniform, thin, porous mat of the primary thermoplastic polymer, with or without the addition of reinforcing stranded glass or thermoplastic yarns. Chemically bonding with a water-resistant resin or thermally bonding with other thermoplastic polymers shall be permitted.

6. Physical Properties, Thickness, and Mass

6.1 Fabrics shall conform to the thickness, mass, and physical properties presented in Table 1.

7. Unit Mass

7.1 Determine the unit mass of the fabric using the procedures described in Test Methods D 1117.

8. Workmanship, Finish, and Appearance

8.1 The finished material shall be free of visible defects such as ragged or untrue edges, folds, creases, wrinkles, tears and holes.

9. Sampling

9.1 Sample the material and determine the properties enumerated in this specification in accordance with the test procedures referenced herein (also see Practice D 1776).