



Designation: D5665/D5665M – 99a (Reapproved 2021)

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

This standard is issued under the fixed designation D5665/D5665M; 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 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 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 nonconformance with the standard.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D123 Terminology Relating to Textiles

D1079 Terminology Relating to Roofing and Waterproofing

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, Fabrics and Bituminous Sheet Materials.

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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.

D1117 Guide for Evaluating Nonwoven Fabrics (Withdrawn 2009)³

D1776/D1776M Practice for Conditioning and Testing Textiles

D1777 Test Method for Thickness of Textile Materials

D4830/D4830M Test Methods for Characterizing Thermoplastic Fabrics Used in Roofing and Waterproofing

D5035 Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)

D5733 Test Method for Tearing Strength of Nonwoven Fabrics by the Trapezoid Procedure (Withdrawn 2008)³

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminologies **D123** and **D1079**.

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, needled;

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;

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

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

³ The last approved version of this historical standard is referenced on www.astm.org.