



Designation: D4830/D4830M – 98 (Reapproved 2021)

Standard Test Methods for Characterizing Thermoplastic Fabrics Used in Roofing and Waterproofing¹

This standard is issued under the fixed designation D4830/D4830M; 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 These test methods cover the procedures for characterizing thermoplastic fabrics (for example polyester, polyamide, polypropylene, and so forth) used in prefabricated roofing and waterproofing membranes.

1.2 Procedures appear in the following order:

	Section
Unit Mass	3
Thickness	4
Breaking Load, Elongation, and Work-to-Break	5
Trapezoid Tearing Strength	6
Puncture Strength	7
Static Heat Stability	8
Dynamic Heat Stability	9

1.3 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.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

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.*

¹ These test methods are under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and are the direct responsibility of Subcommittee D08.04 on Felts, Fabrics and Bituminous Sheet Materials.

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2. Referenced Documents

2.1 ASTM Standards:²

- D76/D76M Specification for Tensile Testing Machines for Textiles
- D123 Terminology Relating to Textiles
- D885/D885M Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Manufactured Organic-Base Fibers
- D1117 Guide for Evaluating Nonwoven Fabrics (Withdrawn 2009)³
- D1776/D1776M Practice for Conditioning and Testing Textiles
- D4354 Practice for Sampling of Geosynthetics and Rolled Erosion Control Products (RECPs) for Testing
- D5035 Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)
- D5729 Test Method for Thickness of Nonwoven Fabrics (Withdrawn 2008)³
- D5733 Test Method for Tearing Strength of Nonwoven Fabrics by the Trapezoid Procedure (Withdrawn 2008)³
- E1 Specification for ASTM Liquid-in-Glass Thermometers
- E18 Test Methods for Rockwell Hardness of Metallic Materials

3. Unit Mass

3.1 Determine the unit mass of the fabric using procedures described in Guide D1117. Report in g/m² or oz/yd².

4. Thickness

4.1 Determine fabric thickness following procedures described in Test Method D5729.

5. Breaking Load, Elongation, and Work-to-Break

5.1 Determine the breaking load and elongation by the cut strip method described in Test Method D5035 with the following exceptions:

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.

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