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Designation: D 4851 – 97

Standard Test Methods for Coated and Laminated Fabrics for Architectural Use[1]

This standard is issued under the fixed designation D 4851; 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 testing of coated and laminated fabrics made primarily for use in fabric roof systems. These coated and laminated fabrics are generally in either an air supported or tension supported construction of fabric roof systems.

1.2 These methods can be used for most fiber-based, coated and laminated architectural fabrics.

1.3 This standard includes the following sections that provide test procedures for coated and laminated architectural fabrics:

	Section
Fabric Count	8
Mass per Unit Area	9
Fabric Thickness	10
Fabric Width	11
Fabric Length	12
Fabric Bow	13
Adhesion of Coating to Fabric	14
Uniaxial Elongation Under Static Load	15
Fabric Breaking Force	16
Breaking Strength After Crease Fold	17
Elongation at Break	18
Fabric Trapezoid Tear Force	19
Resistance to Accelerated Weathering	20
Solar Optical Properties	21
Fabric Flame Resistance	22
Noise Reduction Coefficient	23

1.4 These test methods include only testing procedures and do not include specifications or tolerances. They are intended as a guide for specifications. Any of these methods may be used in material specifications to evaluate requirements for a specific end use as related to a particular job.

1.5 The values stated in either SI or inch-pound units are to regarded separately as the standard. Within the text, the inch-pound units are shown in parentheses. The values stated in each system are not exact equivalents; therefore, each system shall be used independently of the other.

1.6 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

C 423 Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method[2]
D 123 Terminology Relating to Textiles[3]
D 751 Test Methods for Coated Fabrics[4]
D 1003 Test Method for Haze and Luminous Transmittance of Transparent Plastics[5]
D 1494 Test Method for Diffuse Light Transmission Factor of Reinforced Plastics Panels[6]
D 1776 Practice for Conditioning Textiles for Testing[3]
D 1777 Method of Measuring Thickness of Textile Materials[3]
D 2904 Practice for Interlaboratory Testing of a Textile Test Method that Produces Normally Distributed Data[3]
D 2906 Practice for Statements on Precision and Bias for Textiles[3]
D 3773 Test Methods for Length of Woven Fabric[7]
D 3774 Test Methods for Width of Woven Fabric[7]
D 3775 Test Method for Fabric Count of Woven Fabric[7]
D 3776 Test Methods for Mass Per Unit Area (Weight) of Woven Fabric[7]
D 3882 Test Method for Bow and Skewness in Woven and Knitted Fabrics[7]
D 4848 Terminology of Force, Deformation and Related Properties of Textiles[7]
D 5035 Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)[7]
D 5587 Test Method for Tearing Strength of Fabrics by the Trapezoid Procedure[7]
E 84 Test Method for Surface Burning Characteristics of Building Materials[8]
E 108 Test Methods for Fire Tests of Roof Coverings[8]

[1] These test methods are under the jurisdiction of ASTM Committee D-13 on Textiles and are the direct responsibility of Subcommittee D13.59 on Fabric Test Methods, General.

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[2] *Annual Book of ASTM Standards*, Vol 04.06.
[3] *Annual Book of ASTM Standards*, Vol 07.01.
[4] *Annual Book of ASTM Standards*, Vol 09.02.
[5] *Annual Book of ASTM Standards*, Vol 08.01.
[6] *Annual Book of ASTM Standards*, Vol 07.02.
[7] *Annual Book of ASTM Standards*, Vol 04.07.
[8] *Annual Book of ASTM Standards*, Vol 12.02.

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