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Standard Guide for Backing Fabric Characteristics of Pile Yarn Floor Coverings[1]

This standard is issued under the fixed designation D2646; 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 guide covers the procedures listed as follows for testing woven, knitted and nonwoven backing fabrics designed for use in the manufacture of pile yarn floor coverings. The procedures appear in the following order:

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 *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.*

1.4 *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
~~D1776~~D1776/D1776M Practice for Conditioning and Testing Textiles
D2257 Test Method for Extractable Matter in Textiles
~~D3773~~D3773/D3773M Test Methods for Length of Woven Fabric
D3774 Test Method for Width of Textile Fabric
D3775 Test Method for End (Warp) and Pick (Filling) Count of Woven Fabrics
~~D3776~~D3776/D3776M Test Methods for Mass Per Unit Area (Weight) of Fabric

[1] This guide is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.21 on Pile Floor Coverings.

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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.

D3882 Test Method for Bow and Skew in Woven and Knitted Fabrics
D3887 Specification for Tolerance for Knitted Fabrics (Withdrawn 2017)[3]
D5034 Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)
D5684 Terminology Relating to Pile Floor Coverings

3. Terminology

3.1 For definitions of terms relating to Pile Floor Coverings, D13.21, refer to Terminology D5684.

3.1.1 The following terms are relevant to this standard: backing fabric, carpet, dents per unit width, extractable matter, finished, finished pile yarn floor covering, floor covering, nonwoven fabric, pile, pile yarn floor covering, textile floor covering, tufted fabric, wale, wires per unit width.

3.2 For all other terminology related to textiles, refer to Terminology D123.

4. Summary of Test Methods, General

4.1 A summary of the directions prescribed for the determination of specific properties is stated in the appropriate sections of specific test methods.

5. Significance and Use

5.1 These test methods may be used for acceptance testing of commercial shipments; however, caution is advised because information about between interlaboratory precision is incomplete. Comparative tests as directed in 5.1.1 may be advisable.

5.1.1 If there are differences of practical significance between reported test results for two laboratories (or more), comparative tests should be performed to determine if there is statistical bias between them using competent statistical assistance. As a minimum, use test samples for such comparative tests that are as homogeneous as possible, drawn from the same lot of material as the samples that resulted in the disparate results during initial testing, and that are randomly assigned in equal numbers to each laboratory for testing. The test results from the laboratories should be compared using statistical test for unpaired data at a probability level chosen prior to the testing series. If a bias is found either its cause must be found and corrected, or future test results for that material must be adjusted in consideration of the known bias.

5.2 These test methods are useful to evaluate quality and cost control during the manufacture of pile yarn floor covering.

5.3 The significance and uses of particular properties and test methods are discussed in the appropriate sections of the specified test methods.

6. Sampling

6.1 *Lot Sample*—As a lot sample for acceptance testing, take at random the number of rolls or pieces, as directed in an applicable material specification or other agreement between the purchaser and the supplier. Consider the rolls or pieces of material to be the primary sampling units. In the absence of such agreement, take one roll or piece from the lot to be tested.

NOTE 1—An adequate specification or other agreement between the purchaser and the supplier requires taking into account the variability between rolls or pieces of floor covering and between specimens from a roll or pieces of floor covering to provide a sampling plan with a meaningful producer's risk, consumer's risk, acceptable quality level, and limiting quality level.

6.2 *Laboratory Sample*—For acceptance testing, take a sample from a roll approximately 1.5 yd (1.5 m) long extending the width of the material from each roll or piece in the lot, unless otherwise specified in the specific test method. For rolls of floor covering, take a sample that will exclude fabric from the outer wrap of the roll or the inner wrap around the core.

6.3 *Test Specimens*—From each laboratory sampling unit, take three specimens with the longer direction parallel to the machine direction, unless otherwise specified in the specific test method. Consider the long direction as the direction of test.

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