



Designation: D1335 – 17^{ε1}

Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings¹

This standard is issued under the fixed designation D1335; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

^{ε1} NOTE—In 8.1, the units in parentheses were corrected from (300 ± 10 mm/min) to (300 ± 12 mm/min) editorially in March 2018.

1. Scope

1.1 This test method covers the measurement of force required to pull or break a tuft from a pile floor covering sample.

1.2 This test method is applicable to both cut and loop pile yarn floor covering.

1.3 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.

1.4 *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 and health 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.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D76 Specification for Tensile Testing Machines for Textiles

D123 Terminology Relating to Textiles

D1776 Practice for Conditioning and Testing Textiles

D5684 Terminology Relating to Pile Floor Coverings

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

¹ This test method 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.

E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

3. Terminology

3.1 For all terminology related to Pile Floor Coverings, D13.21, refer to Terminology D5684.

3.1.1 The following terms are relevant to this standard: carpet, constant-rate-of-extension, cut pile yarn floor covering, finished, finished pile yarn floor covering, floor covering, loop pile yarn floor covering, pile, pile yarn floor covering, textile floor covering, tuft, tuft bind, tuft leg, tufted fabric.

3.2 For all other terminology related to textiles see Terminology D123.

4. Summary of Method

4.1 A test sample is mounted in a special clamping fixture to the base of a tensile testing machine. A hook (for loops specimen) or a tuft clamp (for cut pile specimen) are used to remove a specimen from the sample. The force to pull the specimen free from the test sample is measured as the tuft bind.

5. Significance and Use

5.1 Test Method D1335 for tuft bind of pile yarn floor coverings is being used for acceptance testing of commercial shipments. Comparative tests as directed in 5.1.1 may be advisable.

5.1.1 In case of a dispute arising from differences in reported test results using this test method, the purchaser and the supplier should conduct comparative tests to determine if there is a statistical bias between their laboratories. Competent statistical assistance is recommended from the investigation of bias. As a minimum, the two parties should take a group of test samples that are homogeneous as possible and are from a lot of material of the type in question. The test samples should then be randomly assigned in equal numbers to each laboratory for testing. The average results from the two laboratories should be compared using appropriate statistical analysis, and a probability level chosen by the two parties before testing begun. If a bias is found, either its cause must be found and corrected or