



Standard Test Method for Pile Thickness of Finished Level Pile Yarn Floor Coverings¹

This standard is issued under the fixed designation D 6859; 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 test method covers the determination of pile thickness of finished level pile yarn floor covering using a thickness measuring instrument having a stationary surface (platen), a circular pressure foot under specified force, and capable of being moved vertically above the platen.

1.2 This test method is applicable only to finished level loop and cut pile constructions with tuft heights less than 6 mm (0.25 in.).

NOTE 1—Determination of pile thickness of finished level pile yarn floor coverings was previously contained within Test Methods D 418. For user convenience, Subcommittee D13.21 subdivided Test Methods D 418 into separate standards of which this test method is one.

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

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles²

D 418 Test Methods of Testing Pile Yarn Floor Covering Construction³

D 1776 Practice for Conditioning and Testing Textiles²

D 5684 Terminology Relating to Pile Floor Coverings⁴

D 5823 Test Method for Tuft Height of Pile Floor Coverings⁴

E 122 Practice for Choice of Sample Size to Estimate the Average Quality of a Lot Process⁵

3. Terminology

3.1 Definitions:

3.1.1 For definitions of textile terms relating to pile yarn floor coverings, refer to Terminology D 5684.

3.1.1.1 For discussion of terminology specific to this standard, see Annex A1.

3.1.2 For definitions of other textile terms used in this test method, refer to Terminology D 123.

4. Summary of Test Method

4.1 The total thickness of an unsheared strip specimen is measured as the distance between two parallel plates exerting a specified pressure on the test specimen. The pile yarn of the strip specimen is sheared down to a stubble. The backing thickness of the sheared strip specimen is measured as the distance between two parallel plates exerting a different specified pressure on the sheared strip specimen. The difference between the two measurements is the pile thickness.

5. Significance and Use

5.1 The determination of pile thickness of level pile yarn floor covering is useful in quality and cost control during the manufacture of pile yarn floor covering. The appearance and performance may be affected by changes in pile thickness of pile yarn floor coverings. This test method is considered satisfactory for acceptance testing of commercial shipments because current estimates of between laboratory precision are acceptable, and this test method is commonly used in the trade for acceptance testing.

5.2 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 a statistical bias between them, using competent statistical assistance. As a minimum, use the samples for such comparative tests that are as homogenous as possible, drawn from the same lot of material as the samples that resulted in disparate results during initial testing and randomly assigned in equal numbers to each laboratory. The test results from the laboratories involved should be compared using a statistical test for unpaired data, 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.

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 Yarn Floor Coverings.

Current edition approved Feb 10, 2003. Published May 2003.

² *Annual Book of ASTM Standards*, Vol 07.01.

³ Discontinued, see 1997 *Annual Book of ASTM Standards* Vol 07.01.

⁴ *Annual Book of ASTM Standards*, Vol 07.02.

⁵ *Annual Book of ASTM Standards*, Vol 14.02.