



Designation: D3882 – 08 (Reapproved 2020)

Standard Test Method for Bow and Skew in Woven and Knitted Fabrics¹

This standard is issued under the fixed designation D3882; 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 bow and skew of filling yarns in woven fabrics and the courses in knitted fabrics.

1.2 This test method can also be used to measure the bow and skew of printed geometric designs.

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 non-conformance 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.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D123 Terminology Relating to Textiles

D1776 Practice for Conditioning and Testing Textiles

D2904 Practice for Interlaboratory Testing of a Textile Test Method that Produces Normally Distributed Data (Withdrawn 2008)³

¹ This test method is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.60 on Fabric Test Methods, Specific.

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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.

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

D2906 Practice for Statements on Precision and Bias for Textiles (Withdrawn 2008)³

D3990 Terminology Relating to Fabric Defects

3. Terminology

3.1 For all terminology related to Fabric Defects see Terminology **D3990**.

3.2 The following terms are relevant to this standard: bow, double bow, double hooked bow, double reverse bow, hooked bow, knitted fabric, skew, standard atmosphere for testing textiles.

3.3 For definitions of all other textile terms see Terminology **D123**.

4. Summary of Test Method

4.1 *Bow*—A straightedge is placed across the fabric between two points at which a marked filling yarn, knitting course, designated printed line, or designated design meets the two selvages or edges. The greatest distance between the straightedge and the marked filling line, knitting course, designated printed line, or designated design is measured parallel to the selvage.

4.2 *Skew*—The straight-line distortion of a marked filling yarn, knitting course, designated printed line, or designated design is measured from its normal perpendicular to the selvage or edge.

5. Significance and Use

5.1 This test method is considered satisfactory for acceptance testing of commercial shipments.

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 a statistical bias between them, using competent statistical assistance. As a minimum, the test samples to be used are as homogeneous as possible, are drawn from the material from which the disparate test results were obtained, and are randomly assigned in equal numbers to each laboratory for testing. Other fabrics with established test values may be used for this purpose. The test results from the two laboratories should be compared using a statistical test for unpaired data, at a probability level chosen prior to the testing series. If a bias is