



Designation: D7811 – 13 (Reapproved 2022)

Standard Test Method for Bow and Skew Using a Measuring Tool¹

This standard is issued under the fixed designation D7811; 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 is used to determine the bow and skew of woven and knitted fabrics over a fixed distance, using a measuring tool.

1.2 This test method is useful when a small specimen or cut parts need to be evaluated for bow and skew, provided a warp or fill, or both, reference line is available, to aid in aligning the tool.

1.3 Test Method [D3882](#) may be used when measuring bow and skew in fabric in rolls. However, results obtained with [D3882](#) may not be comparable with results obtained by this test method.

1.4 There is no known ISO equivalent standard.

1.5 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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

1.7 *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](#)

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 Physical Test Methods B.

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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](#)

[D3990 Terminology Relating to Fabric Defects](#)

[E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods](#)

[E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method](#)

3. Terminology

3.1 For all terminology related to fabric defect terms, refer to Terminology [D3990](#).

3.1.1 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.

3.2 For all other terminology related to textiles, refer to Terminology [D123](#).

4. Summary of Test Method

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

5. Significance and Use

5.1 This test method provides a standard procedure for obtaining data for research and development, quality control, acceptance and rejection under specifications, and for special purposes.

5.2 The data obtained by this test method is applicable to the material under the conditions of this particular test and is not necessarily the same as obtained under other environments in use.

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

5.4 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