



Designation: D4721 – 12 (Reapproved 2019)

Standard Practice for Evaluation of the Performance of Machine Washable and Drycleanable Bedcoverings and Accessories¹

This standard is issued under the fixed designation D4721; 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 practice may be used to evaluate specific characteristics of importance in the performance of bedcoverings and accessories (machine washable or drycleanable, woven and knit) including bedspreads, comforters, quilts, pillowshams, dust ruffles, and blankets, hereinafter referred to collectively as bedcoverings.

1.2 This practice is not to be used to evaluate bedcoverings that are refurbished by handwashing.

1.3 This practice shall not be construed to be a standard of performance for bedcoverings.

1.4 This practice shall not be used to evaluate sheets.

1.5 This practice may be used by mutual agreement between purchaser and supplier to set purchasing specifications.

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](#)

[D1683 Test Method for Failure in Sewn Seams of Woven Fabrics](#)

[D1776 Practice for Conditioning and Testing Textiles](#)

¹ This practice is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.63 on Home Furnishings.

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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.

[D3136 Terminology Relating to Care Labeling for Apparel, Textile, Home Furnishing, and Leather Products](#)

[D3773 Test Methods for Length of Woven Fabric](#)

[D3940 Test Method for Bursting Strength \(Load\) and Elongation of Sewn Seams of Knit or Woven Stretch Textile Fabrics \(Withdrawn 1995\)](#)³

[D3993 Performance Specification for Woven, Thermal, Flocked, Nonwoven, and Knitted Household Blanket Fabrics \(Withdrawn 1994\)](#)³

[D4037 Performance Specification for Woven, Knitted, or Flocked Bedspread Fabrics](#)

[D7023 Terminology Relating to Home Furnishings](#)

2.2 *AATCC Standards:*⁴

[EPI Gray Scale for Color Change](#)

[TM88B Seam Smoothness in Fabrics after Home Laundering](#)

[TM96 Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics Except Wool](#)

[TM135 Dimensional Changes of Fabrics after Home Laundering](#)

[TM143 Appearance of Apparel and Other Textile End Products After Home Laundering](#)

[TM158 Dimensional Changes on Drycleaning in Perchloroethylene: Machine Method](#)

NOTE 1—Reference to documents in this specification give only the permanent part of the designation of ASTM, AATCC or other test methods or standards. The current edition of each standard prevails.

3. Terminology

3.1 For all terminology related to Home Furnishings see Terminology [D7023](#).

3.2 The following terms are relevant to this standard: bedcovering, bedspread, blanket, comforter, drop, dust ruffle, flounce, quilt, sham.

3.3 For definitions of all other textile terms see Terminologies [D123](#) and [D3136](#).

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

⁴ Available from American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709-2215, <http://www.aatcc.org>.

4. Significance and Use

4.1 This practice may be used to evaluate pertinent performance characteristics of machine washable or drycleanable bedcoverings.

4.2 The characteristics to be evaluated and the acceptance criteria assigned to these areas shall be set by mutual agreement between purchaser and supplier.

4.3 The significance and use of specific properties are discussed in the appropriate test methods and performance standards.

5. Sampling, Selection, and Number of Specimens

5.1 *Division into Lots*—For acceptance testing, divide the product into lots as agreed upon by the purchaser and the supplier.

5.2 *Lot Sample*—As a lot sample for acceptance testing, take at random the number of shipping cartons directed in an applicable material specification or other agreement between the purchaser and the supplier. Consider shipping cartons of bedcoverings or accessories to be the primary sampling units.

NOTE 2—A realistic specification or other agreement between the purchaser and the supplier requires taking into account the variability between shipping cartons, between items within a carton, and between specimens within an item so as to provide a sampling plan which has a meaningful producer’s risk, consumer’s risk, acceptable quality level, and limiting quality level.

5.3 *Laboratory Sample*—As a laboratory sample for acceptance testing, take two items from each shipping carton in the lot sample.

5.4 *Test Specimens*—Take test specimens from each item in the laboratory sample as directed in individual test methods. Perform each test on the product as it will reach the customer.

CHARACTERISTICS AND TEST METHODS

6. Characteristics

6.1 The areas to be evaluated and the acceptance criteria assigned to these areas shall be set by mutual agreement between purchaser and supplier.

7. Fabric Performance Characteristics

7.1 The fabric in the item shall be evaluated as directed in Performance Specification D3993 for blanket fabrics, and Performance Specification D4037 for bedspread fabrics.

8. Bedcoverings Performance Characteristics Prior to Refurbishing

8.1 Evaluate joining seam performance (strength) as directed in Test Method D1683 for woven fabrics or Test Method D3940 for knit fabrics. Evaluate appearance of all seams as directed in AATCC TM88B.

8.2 Mark and record measurements as directed in Section 11 of this practice to establish size consistency, side to side, and part to part.

8.3 Examine bedcoverings for shade difference from part to part, as directed in AATCC EP1.

8.4 Examine bedcoverings for all obvious defects.

9. Procedure for Measuring Bedcoverings

9.1 Condition the bedcoverings, laid flat in the standard atmosphere for testing textiles as directed in Practice D1776 for at least 4 h.

9.2 When necessary, mark the dimension to be measured with a suitable marking device.

9.3 Unless otherwise stipulated by mutual agreement between purchaser and supplier, make original measurement marks at the locations shown in Fig. 1.

9.3.1 Measure the total length of the bedcovering 250 mm (10 in.) in from each selvage or hem and in the middle of the covering, including all ruffles, flounces, and trims (A-A, Fig. 1) in a relaxed state, taking care that all wrinkles have been removed.

9.3.2 Measure the total width of bedcovering 250 mm (10 in.) from each selvage or hem and in the middle including all ruffles, flounces, and trims (B-B, Fig. 1) in a relaxed state, taking care that all wrinkles have been removed.

9.3.3 Mark the inner edge of ruffle or flounce where attached to item with 250-mm (10-in.) or 1-m (36-in.) gauge marks (D-D, Fig. 1). Permitting all fullness to remain, mark the outer edge of the ruffle or flounce with corresponding gauge marks (E, Fig. 1). Measure full dimensions between second set of gauge marks (E-E, Fig. 1).

NOTE 3—Ruffle and flounce fullness are standard dimensions which are based on 250-mm (10-in.) or 1-m (36-in.) measurements. It is therefore recommended that these measurements be used.

9.3.4 The ruffle and flounce widths edge to edge (C-B1, F-F, Fig. 1).

9.3.5 On the pillowsham, measure the length of the opening.

9.3.6 On each panel of the bedcovering, including ruffle or flounce, both face and back, mark with a suitable marking device three sets of 1-m (36-in.) gauge marks parallel to the

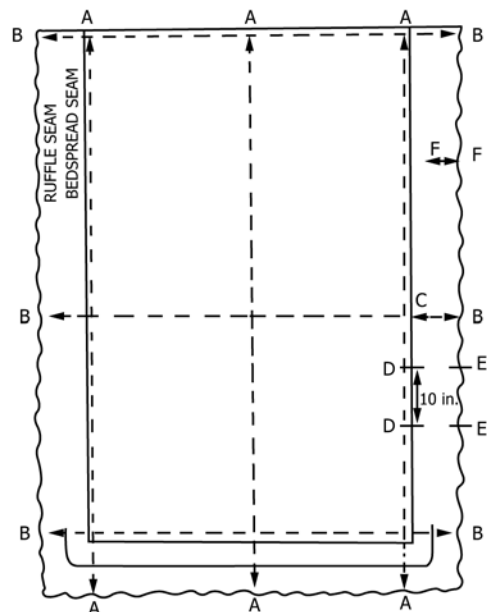


FIG. 1 Measurement Marks