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Standard Specification for Woven and Warp Knitted Comforter Fabrics¹

This standard is issued under the fixed designation D4769; 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 specification covers woven and warp knitted comforter fabrics, composed of any textile fiber, or mixture of fibers.

1.2 These requirements apply to the length and width directions for those properties where fabric direction is pertinent.

1.3 The following safety hazards caveat pertains only to the test methods described in this specification: *This standard may involve hazardous materials, operations, and equipment. 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:²

D123 Terminology Relating to Textiles

D1424 Test Method for Tearing Strength of Fabrics by Falling-Pendulum (Elmendorf-Type) Apparatus²

~~D1682 Test Method for Breaking Load and Elongation of Textile Fabric~~² Test Method for Tearing Strength of Fabrics by Falling-Pendulum (Elmendorf-Type) Apparatus

D2261 Test Method for Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure (Constant-Rate-of-Extension Tensile Testing Machine)²

~~D2262 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Traverse Tensile Testing Machine)~~² Test Method for Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure (Constant-Rate-of-Extension Tensile Testing Machine)

D2724 Test Methods for Bonded, Fused, and Laminated Apparel Fabrics

D2905 Practice for Statements on Number of Specimens for Textiles

D3786 Test Method for Bursting Strength of Textile Fabrics ~~Diaphragm Bursting Strength Tester Method~~³ Diaphragm Bursting Strength Tester Method

D5034 Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)

~~D3787 Test Method for Bursting Strength of Textiles Constant-Rate-of-Traverse (CRT) Ball Burst Test~~ 6797 Test Method for Bursting Strength of Fabrics Constant-Rate-of-Extension (CRE) Ball Burst Test

D7023 Terminology Relating to Home Furnishings

2.2 AATCC Methods:³

8 Colorfastness to Crocking: AATCC Crockmeter Method

~~16A16 Option 1 Colorfastness to Light: Carbon-Arc-Lamp, Continuous Light~~

~~16E Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light~~

~~23 Colorfastness to Burnt Gas Fumes~~ 16 Option 3 Colorfastness to Light: Xenon-Arc Lamp, Continuous Light

~~61 Colorfastness to Washing, Domestic, and Laundering, Commercial: Accelerated~~ Colorfastness to Laundering: Accelerated

116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method

~~124 Appearance of Durable Press Fabrics After Repeated Home Launderings~~ Smoothness Appearance of Fabrics After Repeated Home Launderings

¹ This specification is under the jurisdiction of ASTM Committee D-13 on Textiles and is the direct responsibility of Subcommittee D13.56 on Performance Standards for Textile Fabrics.

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² This specification 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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³ Annual Book of ASTM Standards, Vol 07.01.

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.

⁴ Annual Book of ASTM Standards, Vol 07.02.

⁵ Available from American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

132 Colorfastness to Drycleaning

~~135 Dimensional Changes in Automatic Home Laundering of Durable Press Woven or Knit Fabrics~~ Dimensional Changes of Fabrics after Home Laundering

AATCC Evaluation Procedure 1 Gray Scale for Color Change

AATCC Evaluation Procedure 2 Gray Scale for Staining

~~AATCC Evaluation Procedure 3 Chromatic Color Transference Scale~~ AATCC Evaluation Procedure 8 9-Step Chromatic Transference Scale

NOTE 1—References to test methods in this standard give only the permanent part of the designation of ASTM, AATCC, or other test methods. The current editions of each test method cited shall prevail.

3. Terminology

3.1 Definitions:

~~3.1.1 *comforter, n*—a bed covering assembly, consisting of an insulating filler secured between two layers of fabric, used primarily to reduce heat loss.~~

~~3.1.2 *fill leakage, n*—in comforters, either partial or total penetration of the stuffing material through the outer or face fabric.~~

~~3.1.3 For definitions of other textile terms used in this specification, refer to Terminology~~

~~3.1.1 For all terminology related to Home Furnishings see Terminology D7023.~~

~~3.1.2 The following terms are relevant to this standard: comforter, fill leakage.~~

~~3.1.3 For definitions of all other textile terms see Terminology D123, and the Technical Manual of the American Association of Textile Chemists and Colorists.~~

4. Specification Requirements

4.1 The properties of woven comforter fabrics shall conform to the specification requirements in Table 1.

5. Significance and Use

5.1 Upon mutual agreement between the purchaser and seller, fabrics intended for this end use should meet all the requirements listed in Table 1 of this specification.

5.2 It is recognized that for purposes of fashion or aesthetics the ultimate consumer of articles made from these fabrics may find acceptable fabrics that do not conform to all of the requirements in Table 1. Therefore, one or more of the requirements listed in Table 1 may be modified by mutual agreement between the purchaser and seller.

5.2.1 If any of the requirements in Table 1 are modified by mutual agreement between purchaser and seller, any reference to the specification shall state that: “This fabric meets ASTM Specification D4769, except for the following characteristic(s).”

5.3 Where no prepurchase agreement has been reached between the purchaser and seller, and in case of controversy, the requirements listed in Table 1 are intended to be used as a guide only. As stated in 5.2, ultimate consumer demands dictate varying performance parameters for any particular style of fabric.

5.4 The significance and use of particular properties and test methods are discussed in the appropriate sections of the specified test methods.

6. Sampling

6.1 *Acceptance Testing Lot*—Unless there is prior agreement, consider as a lot for acceptance testing all material of a single item received as a single shipment.

6.2 *Lot Samples and Laboratory Samples*— For acceptance testing, take lot samples and laboratory samples as directed in each of the applicable test methods.

6.3 *Test Specimens*—Take the number of specimens directed in each of the applicable test methods. Perform the tests on the fabric as it will reach the customer. Any “partially finished” or “post-finish” fabrics should be processed in accordance with the fabric manufacturer’s instructions.

6.4 If the applicable test method does not specify the number of specimens, use the procedures in Practice D2905 to determine the number of specimens per laboratory sampling unit. Use (1) a reliable estimate of the variability of individual observations on similar materials in the user’s laboratory, (2) a 95 % probability level, and (3) an allowable difference of 5 % of the average between the test results on laboratory sampling units and the average for the laboratory sampling unit. The average for a laboratory sampling unit is the average that would be obtained by applying the test method to all of the potential specimens from that laboratory sampling unit.

7. Test Methods (See Note 1)

~~7.1 *Breaking Strength (Load)*—Determine the dry breaking strength of woven fabrics, in the standard atmosphere for testing textiles, as directed in Test Method D1682, using a constant-rate-of-traverse (CRT) tensile testing machine, with the speed of the pulling jaw at 305 ± 13 mm (12 ± 0.5 in.)/min.~~ Breaking Strength—Determine the breaking strength as directed in Test Method D5034, using a constant-rate-of-extension (CRE) tensile testing machine.