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Designation: D 4037 – 95 (Reapproved 2001)



Designation: D 4037 – 02

Standard Performance Specification for Woven, Knitted, or Flocked Bedspread Fabrics¹

This standard is issued under the fixed designation D 4037; 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 This specification is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.63 on Home Furnishings. Current edition approved May 15, 1995; 10, 2002. Published July 1995; August 2002. Originally published as D 4037 – 81. Last previous edition ~~D 4037 – 81 (1990)~~^{ε1}. D 4037 – 95 (2001).

1. Scope

1.1 This performance specification covers the performance requirements for woven, knitted, or flocked fabrics to be used in the manufacturing of bedspreads.

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

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 1336 Test Method for Distortion of Yarn in Woven Fabrics²

D 1424 Test Method for Tear Resistance Tearing Strength of Woven Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus²

~~D 1682~~ 2261 Test Methods for ~~Breaking Load and Elongation~~ Tearing Strength of Textile Fabrics by the Tongue (Single Rip) Procedure (Constant-Rate-of-Extension Tensile Testing Machine)²

~~D 2262~~ Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Traverse Tensile Testing Machine)²

~~D 2724~~ Test 2724 Test Methods for Bonded, Fused, and Laminated Apparel Fabrics²

D 2905 Practice for Statements on Number of Specimens for Textiles²

D 3786 Test Method for Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics—Diaphragm Bursting Strength Tester Method³

D 3787 Test Method for Bursting Strength of Knitted Goods—Constant-Rate-of-Traverse (CRT) Ball Burst Test³

D 5034 Test Method for Breaking Force and Elongation of Textile Fabrics (Grab Test)²

2.2 AATCC Methods:⁴

~~8-1977~~ Colorfastness to Crocking: AATCC Crockmeter Method

~~16-1977~~ Colorfastness to Light

~~23-1975~~ Colorfastness to Burnt Gas Fumes

~~61-1975~~ Colorfastness to ~~Washing, Domestic and~~ Laundering, Home and Commercial: Accelerated

~~96-1975~~

96 Dimensional Changes in Laundering of Woven and Knitted Textiles Except Wool

~~116-1977~~

116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method

~~124-1978~~ Appearance of ~~Durable Press~~ Fabrics After Repeated Home Launderings

~~132-1976~~ Colorfastness to Drycleaning

~~135-1978~~ Dimensional Changes in Automatic Home Laundering of Woven or Knit Fabrics

172 Colorfastness to Non-Chlorine Bleach in Home Laundering

188 Colorfastness to Sodium Hypochlorite Bleach in Home Laundering

Evaluation Procedure 1 Gray Scale for Color Change

² Annual Book of ASTM Standards, Vol 07.01.

³ Annual Book of ASTM Standards, Vol 07.02.

⁴ Available from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

Evaluation Procedure 2 Gray Scale for Staining

Evaluation Procedure 38 AATCC 9-Step Chromatic Transference Scale

NOTE 1—Reference to test methods in this specification 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 *Definition:*

3.1.1 *bedspread*—a type of bedcovering that is placed over the blankets and sheets for appearance and warmth.

3.2 For definitions of textile terms used in this specification, refer to the individual ASTM and AATCC test methods and to Terminology D 123.

4. Specification Requirements

4.1 The properties of woven, knitted, or flocked bedspread fabrics shall conform to the specification requirements in Table 1 individual ASTM and AATCC test methods and to Terminology D 123.

5. Significance and Use

5.1 Upon mutual agreement between the purchaser and the seller, fabrics

4.1 Fabrics intended for this end-use should meet all of the requirements listed in Table 1.

5.2 It should be recognized that for purposes fabrics can be produced with an almost infinite number of construction variables (for example, type of fibers, percentage of fibers, yarn twist, yarn number, warp and pick count, chemical and mechanical finishes). Additionally, fashion or aesthetics dictate that the ultimate consumer of may find acceptable 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 the seller.

5.2.1 In such cases, any references to the specification shall specify that: “This fabric meets ASTM Specification D 4037 except for the following characteristic(s).”

5.3 Where 1.

4.2.1 Hence, no prepurchase agreement has been reached between the purchaser and the seller, and in case of controversy, the requirements listed in Table 1 are intended single performance specification can possibly apply to all the various fabrics that could be used as a guide only. As noted in 5.2, ultimate consumer demands dictate varying performance parameters utilized for any particular style of fabric.

5.4 The significance and this end-use.

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

6. Sampling

6.1 Perform tests on the fabric as it will reach the user.

6.2 Unless otherwise agreed upon, as when specified in an applicable material specification, take the number of specimens directed in each of the applicable test methods:

6.2.1 If there has been no prior agreement and the test method does not specify the number of specimens, use the procedures in Practice D 2905 to determine the number of specimens, such that the user may expect at the 95 % probability level that the test result is not more than 5 % of the average above or below the lot average (that is, the average that would be obtained by applying this method to the entire lot) when using a reliable estimate of variability of individual observations on similar materials in the user’s laboratory under conditions of single-operator precision.

7.

5. Test Methods

7.1 *Breaking Strength Force (load) (woven fabrics only) (Woven Fabrics Only)*— Determine the dry breaking strength (load), as directed in the grab test procedure of Test Methods D 1682 D 5034 using a constant-rate-of-extraversion (CRFE) tensile testing machine with the speed of the pulling jaw at 305 ± 13 mm (12 ± 0.5 in.)/min. grab machine.

NOTE 2—If preferred, the use of a constant-rate-of-extraversion (CRET) tensile testing machine is permitted. The crosshead speed should may be as agreed upon used. There may be no overall correlation between the purchaser results obtained with the CRT machine and with the seller. However, in CRE machine. Consequently, these two breaking load testers cannot be used interchangeably. In case of controversy, the CRF CRE method as described in 7.1 shall prevail.

7.2 *Bursting Strength* (knit fabrics only)—Determine the bursting strength of knit fabrics in accordance with Test Method D 3786 using an approved type of diaphragm bursting tester or as directed in D 3787 using an approved constant-rate-of-traverse (CRT) machine equipped with a bursting attachment as agreed upon between the purchaser and the seller. attachment.

NOTE 3—Care should be taken to subtract the tare diaphragm pressure from the gross pressure to obtain actual bursting strength of fabric when using the diaphragm bursting tester. Calibrate the equipment according to the manufacturer’s instruction before using. Since there is no overall correlation

TABLE 1 Specification Requirements

NOTE 1—Class for colorfastness and DP rating is based on a numerical scale of 5 for negligible or no color change, color transfer, or wrinkle to 1 for very severe color change, color transfer, or wrinkle. The numerical rating in Table 1 or a higher numerical rating is acceptable.

Characteristic	Requirements		Section
	Woven	Knit	
Breaking strength (load)	25 lbf (111 N) min	...	7.1
Breaking strength force (load)	25 lbf (111 N) min	...	7.1
Bursting strength	...	35 psi (241 kPa) min	7.2
Tear strength	1.5 lbf (6.7 N) min		7.3
Dimensional change:			
Laundering and dry cleaning (each direction):			7.4.1– 7.4.2
Tailored type	3.5 % max	5.0 % max	—
Tailored type	±3.5 % max	±5.0 % max	—
Throw type	5.0 % max	5.0 % max	—
Throw type	±5.0 % max	±5.0 % max	—
Durable press			7.5– 7.5– 7.5.2.1
Fabric appearance rating	DP3.5 min	DP 3.5 min	—
Fabric appearance (durable press)	SA3.5 min	SA 3.5 min	—
Retention of hand, character, and appearance	Pa-ss	Pa-ss	7.6
Retention of hand, character, and appearance	No significant change	No significant change	7.6
Durability of back coating	Pa-ss	Pa-ss	7.7
Durability of back coating	No significant changes	No significant change	7.7
Colorfastness to:			
Laundering:			7.8.1
Shade change	Class 4 min ^A	Class 4 min ^A	—
Shade change	Grade 4 min ^A	Grade 4 min ^A	—
Staining	Class 3 min ^B	Class 3 min ^B	—
Staining	Grade 3 min ^B	Grade 3 min ^B	—
Bleaching			Drycleaning: Drycleaning:
Sodium hypochlorite			7.8.2
Sodium hypochlorite	Grade 4 min ^A	Grade 4 min ^A	7.8.2
Shade change	Class 4 min ^A	Class 4 min ^A	—
Shade change	Grade 4 min ^A	Grade 4 min ^A	—
Burnt gas fumes (two cycles)			—
Shade change			7.8.3
Shade change	Grade 4 min ^A	Grade 4 min ^A	7.8.3
Original	E		—
Original			—
Shade change			5.8.4
Original	Class 4 min ^A	Class 4 min ^A	—
Original	Grade 4 min ^A	Grade 4 min ^A	—
After one laundering or one dry cleaning	Class 4 min ^A	Class 4 min ^A	—
After one laundering or one dry cleaning	Grade 4 min ^A	Grade 4 min ^A	—
Crocking:			7.8.4
Dry	Class 4 min ^C	Class 4 min ^C	—
Dry	Grade 4 min ^C	Grade 4 min ^C	—
Wet	Class 3 min ^C	Class 3 min ^C	—
Wet	Grade 3 min ^C	Grade 3 min ^C	—
Light (20 AATCC standard fading units)	Step 4 min ^A	Step 4 min ^A	5.8.6
Light (20 AATCC standard fading units)	Step- 4 min ^A	Step- 4 min ^A	5.8.6
Flammability	Pass	Pass	7.8.5

^A AATCC Gray Scale for Color Change.

^B AATCC Gray Scale for Staining.

^C AATCC Chromatic Transference Scale.

between the results obtained with the CRT machine equipped with a bursting attachment and the diaphragm bursting tester, these two bursting testers cannot be used interchangeably. In case of controversy, the ~~diaphragm CRT machine equipped with a bursting tester (D 3786) attachment method~~ shall prevail.

NOTE 4—The precision of the ball burst method using the CRT machine equipped with a bursting attachment and the precision of the diaphragm bursting tester method are being established by Subcommittee D13.59. The methods are accordingly not recommended for acceptance testing unless preceded by an interlaboratory check test in the laboratory of the purchaser and the laboratory of the seller using randomized replicate specimens of the material to be evaluated.

7.5.3 Tearing Strength (woven fabrics only)—Determine tear strength as directed in Test Method ~~D 1424~~ D 2261.

NOTE 5—If preferred, use of Test Methods D 1424 and D 2261 is permitted with existing requirements as given in this specification. There may be no overall correlation between the results obtained with the tongue tear machine and with the Elmendorf machine. Consequently, these two testers cannot be used interchangeably. However, in case of controversy, Method ~~D 1424~~ D 2261 shall prevail.

7.5.4 Dimensional Change:

~~75.4.1 Laundering—Determine the dimensional change after 5 launderings as directed in Test ~~H B~~ (I) (II A) of AATCC Method 135 unless otherwise agreed upon between the purchaser and the seller.~~

~~NOTE 6—Launderable fabrics are expected normally to be dry-cleanable, except where all or part of the fabric is not dry-cleanable and is labeled “Do Not Dry-clean.” “Dry-clean Only” goods are not to be laundered.~~

~~NOTE 7—Nondurable-press items can be hand pressed as directed in ~~5.12~~ 7.4.4 of AATCC 96 or flat-bed pressed as directed in ~~10.1.4 and 10.1.5~~ 7.3.6 of ~~D 2724~~ AATCC 96 after tumble drying to eliminate wrinkles before measuring.~~

~~75.4.2 Drycleaning—Determine the dimensional change after three dry cleanings as directed in ~~10.1.1~~ 10.1 to ~~10.1.5~~ 10.7 of Test Methods D 2724 (Note 6).~~

~~75.5 Fabric Appearance:~~

~~75.5.1 Determine the appearance of durable-press fabric after five launderings and dryings as directed in Test ~~H B~~ (I) (II A) of AATCC Method 124 unless otherwise agreed upon between the purchaser and the seller.~~

~~7.5.2 For .~~

~~5.5.2 For nondurable-press fabrics, launder as in ~~7~~ 5.4.1 and determine fabric smoothness after pressing as directed in ~~5.12~~ 7.4.4 of AATCC 96 or flat-bed pressing as directed in ~~10.1.4 and 10.1.4.5~~ 7.3.6 of Test Method ~~D 2724~~.~~

~~7.5.2.1 The AATCC 96.~~

~~5.5.2.1 The fabric smoothness (durable-press rating) of such fabrics shall have decreased no more than 0.5 durable-press smoothness appearance rating from that of the fabric before it was laundered.~~

~~75.6 Retention of Hand, Character, and Appearance—Fabric tested as directed in ~~7~~ 5.4.1 and ~~7~~ 5.4.2 shall not change more exhibit any significant changes in hand, character, or appearance than in the limitation set by prior agreement between the purchaser and the seller.~~

~~7.7 appearance.~~

~~5.7 Durability of Back Coating—A fabric shall exhibit no evidence of cracking or peeling of back coating when subjected to tests in accordance with ~~7~~ 5.4.1 and ~~7~~ 5.4.2.~~

~~75.8 Colorfastness:~~

~~75.8.1 Laundering—Determine the colorfastness to laundering as directed in Test II A of AATCC Method 61 unless otherwise agreed upon between the purchaser and the seller (Note 6).~~

~~7.8.1.1 In this test use~~

~~5.8.1.1 Use Multifiber Test Fabric No. 10⁵ and and evaluate only cotton, polyester, and the textile fiber(s) composition of the fabric.~~

~~75.8.2 Determine the colorfastness to bleaching as directed in the applicable procedures of AATCC Test Methods 172 and 188.~~

~~5.8.3 Drycleaning—Determine the colorfastness of drycleaning as directed in AATCC Method 132 (Note 6).~~

~~7.8.3—~~

~~5.8.4 Burnt Gas Fumes—Determine the colorfastness to burnt gas fumes after 2 cycles on the original fabric as directed in AATCC Method 23. Repeat the test for 2 cycles on another specimen after 1 laundering or 1 drycleaning.~~

~~NOTE 8—Laundering conditions shall be the same as those in ~~7~~ 5.4.1 and dry-cleaning conditions shall be the same as those in ~~7~~ 5.4.2.~~

~~75.8.45 Crocking—Determine the colorfastness to wet and dry crocking as directed in AATCC Method 8 for solid shades and AATCC Method 116 for prints or as agreed upon between the purchaser and the seller.~~

~~7.8.5 prints.~~

~~5.8.6 Light—Determine colorfastness to light as directed in AATCC Method 16.~~

~~NOTE 9—There are distinct differences in spectral distribution between the various types of machines listed in AATCC Method 16, with no overall correlations between them. Consequently, these machines cannot be used interchangeably. In case of controversy, results obtained with the Water-Cooled Xenon-Arc machine listed in Option E shall prevail.~~

~~NOTE 10—Standardization of the xenon-arc lamp to 60 AATCC FU can be done by using three L4 Blue Wool Lightfastness Standards.~~

~~5.9 Flammability—The flammability requirements shall be as regulated by applicable Government mandatory standards.~~

~~NOTE 11—The technical need for an ASTM test method for determining the flammability of the types of fabrics addressed by this specification has been referred to Subcommittee D13.52 on Flammability and will be incorporated here should a test method become available.~~

86. Keywords

86.1 bedspread; durability; durable press

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