



**Designation: D4114-95a Designation: D 4114 - 02 (Reapproved 2008)**

## Standard Performance Specification for Woven Flat Lining Fabrics for Women's and Girls' Apparel<sup>1</sup>

This standard is issued under the fixed designation D 4114; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This performance specification covers woven flat fabrics comprised of any textile fiber or mixture of fibers to be used as linings for women's and girls' apparel.

1.2 This performance specification is not applicable to woven pile, woven fusible, fire-bonded fusible, sliver-knit pile, and sheepskin lining fabrics.

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

1.4 The following precautionary statement pertains only to the test methods portion, Section 7, of this performance specification. *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:<sup>2</sup>

D 123 Terminology Relating to Textiles

D 434 Test Method for Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam

D 1336 Test Method for Distortion of Yarn in Woven Fabrics

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

D 2261 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) ~~Method~~ Procedure (Constant-Rate-of-Extension Tensile Testing Machine)

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

D 2724 Test Methods for Bonded, Fused, and Laminated Apparel Fabrics

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

#### 2.2 AATCC Test Methods:<sup>3</sup>

8 Colorfastness to Crocking: AATCC Crockmeter Method

15 Colorfastness to Perspiration

16 Colorfastness to Light

23 Colorfastness to Burnt Gas Fumes

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

116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method

124 Appearance of Durable Press Fabrics After Repeated Home Launderings

132 Colorfastness to Drycleaning

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

172 Colorfastness to Non-Chlorine Bleach in Home Laundering

188 Colorfastness to Chlorine Bleach in Home Laundering

Evaluation Procedure No. 1 Gray Scale for Color Change

Evaluation Procedure No. 2 Gray Scale for Staining

Evaluation Procedure No. 3 AATCC Chromatic Transference Scale

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D-13 on Textiles and is the direct responsibility of Subcommittee D13.61 on Apparel. Current edition approved Dec. 10, 1995. Published May 1996. Originally published as D4114-82. Last previous edition D4114-95.

<sup>2</sup> This performance specification is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.61 on Apparel. Current edition approved Aug. 1, 2008. Published October 2008. Originally approved in 1982. Last previous edition approved in 2002 as D 4114 - 02.

<sup>3</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards*, Vol 07.01, volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>4</sup> Annual Book of ASTM Standards, Vol 07.02.

<sup>5</sup> Available from American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709, <http://www.aatcc.org>.

2.3 *Federal Standard*:<sup>4</sup>

16 CFR, Chapter II—Consumer Product Safety Commission Subchapter D—Flammable Fabrics Act Regulations

2.4 *Military Standard*:<sup>5</sup>

MIL-STD-105D Sampling Procedures and Tables for Inspection by Attributes

NOTE 1—Reference to test methods in this performance 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 *Definitions*:

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

3.2 Definitions found in a dictionary of common terms are suitable for this performance specification.

**4. Specification Requirements**

4.1 The properties of woven flat fabrics, to be used as linings in women’s and girls’ apparel, shall conform to the specification requirements in Table 1.

**5. Significance and Use**

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

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

<sup>4</sup> Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402.

<sup>5</sup> Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402.

<sup>5</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

**TABLE 1 Specification Requirements<sup>A</sup>**

NOTE 1—Class for color change, color transfer, and DP rating is based on a numerical scale of 5 for negligible or no color change, color transfer, or wrinkle to 1 for severe color change, color transfer, or wrinkle.

Characteristic	Requirements	Section
<i>Breaking strength (load)(CRT)</i>	111 N (25 lbf), min	7.1
<i>Yarn slippage</i>	6.3-mm (¼-in.) separation at 67 N (15 lbf), min	7.2
<i>Tongue-tear strength</i>	6.7 N (1.5 lbf), min	7.3
<i>Yarn distortion</i>		7.4
Satis	2.5 mm (0.10 in.), max	7.4
All other	1 mm (0.05 in.), max	
<i>Dimensional change:</i>		
After five launderings	3 %, max	7.5.1
After three dry cleanings	2% , max	7.5.2
<i>Colorfastness:</i>		
Burnt gas fumes—2 cycles:		7.6.1
Shade change, original fabric	Class 4 <sup>B</sup> , min	
Shade change after one laundering or one dry cleaning	Class 4 <sup>B</sup> , min	
Chlorine Bleach	Class 4 <sup>B</sup> , min	7.6.7
Non-Chlorine Bleach	Class 4 <sup>B</sup> , min	7.6.8
Laundering:		7.6.2
Shade change	Class 4 <sup>B</sup> , min	
Staining	Class 3 <sup>C</sup> , min	
Dry cleaning:		7.6.3
Shade change	Class 4 <sup>B</sup> , min	
Crocking:		7.6.4
Dry	Class 4 <sup>D</sup> , min	
Wet	Class 3 <sup>D</sup> , min	
Perspiration:		7.6.5
Shade change	Class 4 <sup>B</sup> , min	
Staining	Class 3 <sup>C</sup> , min	
Light (10 AATCC FU)(xenon-arc)	Step 4 <sup>B</sup> , min	7.6.6
<i>Fabric appearance</i> (see 7.7.1.1)	DP 3.5 <sup>E</sup> , min	7.7
<i>Flammability</i>	pass	7.8

<sup>A</sup> There is more than one method that can be used to measure breaking strength (load), tear strength, and lightfastness. These methods cannot be used interchangeably since there may be no overall correlation between them (see Note 2, Note 4, and Note 7).

<sup>B</sup> AATCC Gray Scale for Color Change.

<sup>C</sup> AATCC Gray Scale for Staining.

<sup>D</sup> AATCC Chromatic Transference Scale.

<sup>E</sup> For durable-press fabrics only.