



Designation: ~~D4116 – 01 (Reapproved 2008)~~ D4116 – 14

Standard Performance Specification for Women's and Girls' Knitted and Woven Corset-Girdle-Combination Fabrics¹

This standard is issued under the fixed designation D4116; 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 performance specification covers woven and knitted fabrics composed of any textile fiber or mixture of fibers used in corsets, girdles or a combination of the same.

1.2 This performance specification is not applicable to knitted or woven corset-girdle-combination fabrics, to knitted lace fabrics, and to fabrics used for interlinings.

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

1.4 *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](#)

[D434 Test Method for Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam \(Withdrawn 2003\)](#)³

~~[D4124 Test Method for Separation of Asphalt into Four Fractions](#)~~

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

[D2262 Test Method for Tearing Strength of Woven Fabrics by the Tongue \(Single Rip\) Method \(Constant-Rate-of-Traverse Tensile Testing Machine\) \(Withdrawn 1995\)](#)³

[D3786 Test Method for Bursting Strength of Textile Fabrics—Diaphragm Bursting Strength Tester Method](#)

[D3787 Test Method for Bursting Strength of Textiles—Constant-Rate-of-Traverse \(CRT\) Ball Burst Test](#)

[D5034 Test Method for Breaking Strength and Elongation of Textile Fabrics \(Grab Test\)](#) [5d9bab199/astm-d4116-14](#)

[D7022 Terminology Relating to Apparel](#)

2.2 AATCC Test Methods:⁴

[8 Colorfastness to Crocking: AATCC-Crockmeter Method](#)

[15 Colorfastness to Perspiration](#)

~~[16.3 Colorfastness to Light](#)~~ [Light: Xenon-Arc](#)

[23 Colorfastness to Burnt Gas Fumes](#)

~~[61 Colorfastness to Washing, Domestic, and Laundering, Commercial: Laundering: Accelerated](#)~~

[116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method](#)

~~[124 Appearance of Durable Press Fabrics after Repeated Home Launderings](#)~~

[135 Dimensional Changes in Automatic Home Laundering of Woven or Knit Fabrics of Fabrics after Home Laundering](#)

[172 Colorfastness to Powdered Non-Chlorine Bleach in Home Laundering](#)

[188 Colorfastness to Chlorine Sodium Hypochlorite Bleach in Home Laundering](#)

[Evaluation Procedure No. 1 Gray Scale for Color Change](#)

¹ 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; Feb. 1, 2014. Published October 2008; March 2014. Originally approved in 1982. Last previous edition approved in 2004 as ~~D4116 – 01~~ D4116 – 01(2008). DOI: ~~10.1520/D4116-01R08~~ 10.1520/D4116-14.

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.

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, <http://www.aatcc.org>.

Evaluation Procedure No. 2 Gray Scale for Staining

Evaluation Procedure No. 3 No. 8 AATCC 9-Step Chromatic Transference Scale: Scale

[A Glossary of AATCC Standard Terminology](#)

2.3 Federal Standard:⁵

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

2.4 Military Standard:⁶

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

NOTE 1—Reference 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 For definitions of textile terms used in this performance specification, refer to the individual ASTM and AATCC methods and to Terminology [D123](#).

TABLE 1 Specification Requirements

NOTE 1—Class Grade in colorfastness is based on a numerical scale of 5 for negligible color change or color transfer to 1 for very severe color change or color transfer.

Characteristic	Requirements		Section
	Knit	Woven	
Breaking strength (load)(CRT) ^A	...	301 N (70 lbf), min	7.1
Bursting strength (ball burst) ^A	222 N (50 lbf), min	...	7.2
Tongue-tear strength ^A	...	13 N (3 lbf), min	7.3
Yarn slippage	...	6 mm (¼ in.) separation @ 155 N (35 lbf), min	7.4
<i>Dimensional change:</i>			
Laundering			7.5.1
Length	5 % max	5 % max	
Width	5 % max	3 % max	
<i>Colorfastness:</i>			
Burnt gas fumes—1 cycle:			
Shade change, original fabric	Class 4 ^B , min	Class 4 ^B , min	—
Shade change, original fabric	Grade 4 ^B , min	Grade 4 ^B , min	—
Shade change, after one laundering	Class 4 ^B , min	Class 4 ^B , min	—
Shade change, after one laundering	Grade 4 ^B , min	Grade 4 ^B , min	—
Laundering: ^E			
Shade change	Class 4 ^B , min	Class 4 ^B , min	7.6.2
Staining	Class 3 ^C , min	Class 3 ^C , min	—
Shade change	Grade 4 ^B , min	Grade 4 ^B , min	—
Staining	Grade 3 ^C , min	Grade 3 ^C , min	—
Crocking: ^E			
Dry	Class 4 ^D , min	Class 4 ^D , min	7.6.3
Wet	Class 3 ^D , min	Class 3 ^D , min	—
Dry	Grade 4 ^D , min	Grade 4 ^D , min	—
Wet	Grade 3 ^D , min	Grade 3 ^D , min	—
Perspiration: ^E			
Shade change	Class 4 ^B , min	Class 4 ^D , min	—
Staining	Class 3 ^C , min	Class 3 ^D , min	—
Shade change	Grade 4 ^B , min	Grade 4 ^B , min	—
Staining	Grade 3 ^C , min	Grade 3 ^C , min	—
Light (10 AATCC FU) ^A (xenon-arc)	Step 4 ^B , min	Step 4 ^C , min	7.6.5
Light (10 AATCC Fading Units) ^A (xenon-arc)	Grade 4 ^B , min	Grade 4 ^B , min	7.6.5
Chlorine Bleach	Class 4 ^B , min	Class 4 ^B , min	7.6.6
Sodium Hypochlorite Bleach	Grade 4 ^B , min	Grade 4 ^B , min	7.6.6
Non-chlorine Bleach	Class 4 ^B , min	Class 4 ^B , min	7.6.7
Powdered Non-chlorine Bleach	Grade 4 ^B , min	Grade 4 ^B , min	7.6.7
Flammability	pass	pass	7.7

^A There is more than one method that can be used to measure breaking strength (load).

^B AATCC Gray Scale for Color Change.

^C AATCC Gray Scale for Staining.

^D AATCC 9-Step Chromatic Transference Scale.

^E See [Note 8](#).

⁵ Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402.

⁶ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.