



Designation: **D3995 – 14** **D3995 – 23**

Standard Performance Specification for ~~Men's and Women's~~ Knitted Career Apparel Fabrics: Dress and Vocational¹

This standard is issued under the fixed designation D3995; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This performance specification covers the minimum performance requirements for ~~men's and women's~~ knitted fabrics for dress and vocational career apparel composed of any textile fiber or mixtures of textile fibers.

1.2 This performance specification is not applicable to career apparel fabrics such as those used in protective clothing, that do not patently fit the categories Career Apparel or Career Apparel, Dress (see Terminology **D7022** for these terms). Minimum performance specifications for such fabrics should be as agreed between the purchaser and the seller.

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

1.4 The following precautionary statement pertains only to the test methods portion, Section 7, of this 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 safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *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

D2724 Test Method for Bond Strength of Bonded, Fused, and Laminated Apparel Fabrics

D2905 Practice for Statements on Number of Specimens for Textiles (Withdrawn 2008)³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

D6797 Test Method for Bursting Strength of Fabrics Constant-Rate-of-Extension (CRE) Ball Burst Test

D7022 Terminology Relating to Apparel (Withdrawn 2022)³

2.2 AATCC Methods:⁴

AATCC-8TM8 Colorfastness to Crocking: Crockmeter Method

AATCC-15TM15 Colorfastness to Perspiration

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 Feb. 1, 2014/Jan. 1, 2023. Published March 2014/August 2023. Originally approved in 1981. Last previous edition approved in 2013/2014 as **D3995 – 13**/**D3995 – 14**.¹ DOI: 10.1520/D3995-14.10.1520/D3995-23.

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.

~~AATCC 16.3~~[TM16.3](#) Colorfastness to LightLight: Xenon-Arc
~~AATCC 23~~[TM23](#) Colorfastness to Burnt Gas Fumes
~~AATCC 61~~[TM61](#) Colorfastness to Laundering: Accelerated
~~TM96~~ [Dimensional Changes in Commercial Laundering](#)
~~AATCC 116~~[TM116](#) Colorfastness to Crocking, Rotary Vertical Crockmeter–Method
~~AATCC 124~~[TM124](#) Smoothness Appearance of Fabrics After Repeated-Home Laundering
~~AATCC 132~~[TM132](#) Colorfastness to Drycleaning
~~AATCC 135~~[TM135](#) Dimensional Changes of Fabrics After Home Laundering
~~TM158~~ [Dimensional Changes on Dry Cleaning in Perchloroethylene: Machine Method](#)
~~AATCC 172~~[TM172](#) Colorfastness to Powdered Non-Chlorine Bleach in Home Laundering
~~AATCC 188~~[TM188](#) Colorfastness to Sodium Hypochlorite Bleach in Home Laundering
~~Evaluation Procedure 1E1~~ [Gray Scale for Color Change](#)
~~Evaluation Procedure 2E2~~ [Gray Scale for Staining](#)
~~Evaluation Procedure 8E8~~ [Chromatic](#)~~AATCC 9-Step Chromatic~~ [Transference Scale](#)
[M11 A Glossary of AATCC Standard Terminology](#)

2.3 *Federal Standard*.⁵

[16 CFR 1610 Standard for Flammability of Clothing Textiles](#)

NOTE 1—The specific dated editions of ASTM test methods that prevail in this standard are referenced in Section 7 on Test Methods.

3. Terminology

3.1 For all terminology related to Apparel see Terminology [D7022](#).

3.1.1 The following terms are relevant to this standard: career apparel, career apparel, dress, career apparel, vocational, dimensional change in pressing and finishing, pressing and finishing.

3.2 For ~~terms relating to chemical or colorfastness testing~~, refer to specific AATCC methods. For definitions of all other textile terms see Terminology [D123](#).

3.3 For terms relating to chemical or colorfastness testing, refer to specific AATCC test methods, or the [M11 A Glossary of AATCC Standard Terminology](#), or both.

4. Specification Requirements

4.1 The properties of knitted fabric for men’s and women’s career apparel shall conform to the specification requirement in [Table 1](#).

5. Significance and Use

5.1 Upon mutual agreement between the purchaser and the seller, fabrics intended for this end use should meet all of 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~~[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 D3995 except for the following characteristic(s).”

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

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

TABLE 1 Specification Requirements

NOTE 1—The grades of colorfastness and SA rating are based on a numerical scale of 5 for negligible or no color change, color transfer, or no wrinkle to 1 for very severe color change, color transfer, or wrinkle-smoothness.

Characteristics	Requirements		Section
	Career Dress Apparel	Career Vocational Apparel	
Bursting strength (ball burst)	60 lbf (267 N) min	60 lbf (267 N) min	7.1
Dimensional stability (each direction):			
Pressing and finishing	2 % max shrinkage, 0 % growth	2 % max shrink, 0 % growth	7.2.1
After 5 washes	3 % max	3 % max	7.2.2
After 3 drycleanings	3 % max	3 % max	7.2.4
Fabric smoothness	Grade 4, SA, min	Grade 3, SA, min	7.3
Flammability	Grade 1 or Grade 2	Grade 1 or Grade 2	7.4
Flammability	Class 1	Class 1	7.4
Colorfastness:			
Laundering: ^D			7.5.1
Color change	Grade 4, min ^A	Grade 4, min ^A	
Staining	Grade 3 or 4, min, ^B	Grade 3 or 4, min ^B	
Sodium Hypochlorite Bleach	Grade 4, min ^A	Grade 4, min ^A	7.5.8
Powdered Non-Chlorine Bleach	Grade 4, min ^A	Grade 4, min ^A	7.5.9
Drycleaning:			7.5.3
Color change	Grade 4, min, ^A	Grade 4, min ^A	
Crocking: ^D			7.5.4
Dry	Grade 4, min ^C	Grade 4, min ^C	
Wet	Grade 3, min ^C	Grade 3, min ^C	
Burnt Gas Fumes—1 cycle:			7.5.5
Shade change, original fabric and after 1 laundering or 1 drycleaning	Grade 4, min	Grade 4, min ^A	
Light: (xenon-arc)			7.5.6
Outdoor (40 AATCC-SFU)	Grade 4, min ^A	Grade 4, min ^A	
Outdoor (40 AFUs)	Grade 4, min ^A	Grade 4, min ^A	
Indoor (20 AATCC-SFU)	Grade 4, min ^A	Grade 4, min ^A	
Indoor (20 AFUs)	Grade 4, min ^A	Grade 4, min ^A	
Perspiration: ^D			7.5.7
Color change	Grade 4, min ^A	Grade 4, min ^A	
Staining	Grade 3, min ^B	Grade 3, min ^B	

^A AATCC Gray Scale for Color Change.

^B AATCC Gray Scale for Staining.

^C AATCC 9-Step Chromatic Transference Scale.

^D See Note 6.

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<https://standards.iteh.ai/catalog/standards/sist/b30dd7bd-4b27-4b0a-80af-173310f07fb4/astm-d3995-23>

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 Tests shall be performed on the fabric as it will reach the consumer. Any “partially finished” or “post-finished” fabrics or those which will be pleated, creased, steamed, or pressed during manufacturing should be processed in accordance with the fabric manufacturer’s instructions before tests are made.

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 D2905 to determine the number of specimens, such that the user may expect at the 95 % probability level that the test result is no 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) using a reliable estimate of variability of individual observations on similar materials in the user’s laboratory under conditions of single-operator precision.

7. Test Methods (Note 1 and Table 1’s Note 1)

7.1 *Bursting Strength*—Determine the bursting strength as directed in Test Methods D3787, D3786 or, or D3786/D6797; (see Note 2 and Note 3).