



Designation: D3995 – 13^ε¹

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.

^ε¹ NOTE—Section 3 was updated editorially in September 2013.

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 practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

D123 Terminology Relating to Textiles

D2724 Test Methods for 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Textiles (Withdrawn 2008)³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

D7022 (Withdrawn 2013)³

2.2 AATCC Methods:⁴

AATCC 8 Colorfastness to Crocking: Crockmeter Method

AATCC 15 Colorfastness to Perspiration

AATCC 16.3 Colorfastness to Light

AATCC 23 Colorfastness to Burnt Gas Fumes

AATCC 61 Colorfastness to Laundering: Accelerated

AATCC 116 Colorfastness to Crocking, Rotary Vertical Crockmeter Method

AATCC 124 Smoothness Appearance of Fabrics After Repeated Home Laundering

AATCC 132 Colorfastness to Drycleaning

AATCC 135 Dimensional Changes of Fabrics After Home Laundering

AATCC 172 Colorfastness to Powdered Non-Chlorine Bleach in Home Laundering

AATCC 188 Colorfastness to Sodium Hypochlorite Bleach in Home Laundering

Evaluation Procedure 1 Gray Scale for Color Change

Evaluation Procedure 2 Gray Scale for Staining

Evaluation Procedure 8 Chromatic 9-Step Transference Scale

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.

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.

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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>.

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

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**.

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 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 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.

5.4 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

TABLE 1 Specification Requirements

NOTE 1—The classes of colorfastness and DP rating are 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.

| 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 | Class 4, DP, min | Class 3, DP, min | 7.3 |
| Flammability | Class 1 or Class 2 | Class 1 or Class 2 | 7.4 |
| Colorfastness: | | | |
| Laundering: | | | 7.5.1 |
| Color change | Class 4, min ^A | Class 4, min ^A | |
| Staining | Class 3 or 4, min, ^B | Class 3 or 4, min ^B | |
| Sodium Hypochlorite Bleach | Class 4, min ^A | Class 4, min ^A | 7.5.8 |
| Powdered Non-Chlorine Bleach | Class 4, min ^A | Class 4, min ^A | 7.5.9 |
| Drycleaning: | | | 7.5.3 |
| Color change | Class 4, min, ^A | Class 4, min ^A | |
| Crocking | | | 7.5.4 |
| Dry | Class 4, min ^C | Class 4, min ^C | |
| Wet | Class 3, min ^C | Class 3, min ^C | |
| Burnt Gas Fumes—1 cycle: | | | 7.5.5 |
| Shade change, original fabric and after 1 laundering or 1 drycleaning | Class 4, min | Class 4, min ^A | |
| Light: (xenon-arc) | | | 7.5.6 |
| Outdoor (40 AATCC SFU) | Step 4, min ^A | Step 4, min ^A | |
| Indoor (20 AATCC SFU) | Step 4, min ^A | Step 4, min ^A | |
| Perspiration | | | 7.5.7 |
| Color change | Class 4, min ^A | Class 4, min ^A | |
| Staining | Class 3, min ^B | Class 3, min ^B | |

^A AATCC Gray Scale for Color Change.

^B AATCC Gray Scale for Staining.

^C AATCC 9-Step Chromatic Transference Scale.