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# Standard Performance Specification for Men's and Women's Knitted Career Apparel Fabrics: Dress and Vocational<sup>1</sup>

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 reapproval. A superscript epsilon ( $\varepsilon$ ) indicates an editorial change since the last revision or reapproval.

 $e^1$  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:<sup>2</sup> 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for Bonded, Fused, and Laminated Apparel Fabrics D2905 Practice for Statements on Number of Specimens for Textiles (Withdrawn 2008)<sup>3</sup> 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 Terminology Relating to Apparel 2.2 AATCC Methods:<sup>4</sup> 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

<sup>&</sup>lt;sup>1</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 July 1, 2013Feb. 1, 2014. Published August 2013March 2014. Originally approved in 1981. Last previous edition approved in 20022013 as D3995-02D3995-13<sup>e1</sup>(2008). DOI: 10.1520/D3995-13E01.10.1520/D3995-14.

<sup>&</sup>lt;sup>2</sup> 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.

<sup>&</sup>lt;sup>3</sup> The last approved version of this historical standard is referenced on www.astm.org.

<sup>&</sup>lt;sup>4</sup> 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 8 Chromatic 9-Step Transference Scale 2.3 *Federal Standard:*<sup>5</sup> 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.

#### 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 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)

7.1 Bursting Strength—Determine the bursting strength as directed in Test Methods D3787 or D3786.

NOTE 2—There is no overall correlation between the results obtained with the CRT machine equipped with a bursting attachment and the diaphragm bursting tester. Consequently, these two bursting testers cannot be used interchangeably. In case of controversy, Method D3787 shall prevail.

NOTE 3—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.

#### 7.2 Dimensional Change:

7.2.1 *Pressing and Finishing During Garment Manufacturing*—Where applicable mark the specimen(s) as directed in Section 4.3.1 of AATCC Method 135. Press and finish specimen(s) as agreed by the purchaser and the seller with respect to time, cycles,

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