



Designation: D3785 – 20

# Standard Performance Specification for Woven Necktie and Scarf Fabrics<sup>1</sup>

This standard is issued under the fixed designation D3785; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

## 1. Scope

1.1 This performance specification covers woven necktie and scarf fabrics composed of any textile fiber or mixture of textile fibers.

1.2 This performance specification is not applicable to woven fabrics used for interlinings.

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

1.3.1 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 The following precautionary caveat 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, 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:<sup>2</sup>

D123 Terminology Relating to Textiles

D434 Test Method for Resistance to Slippage of Yarns in

Woven Fabrics Using a Standard Seam (Withdrawn 2003)<sup>3</sup>

D1336 Test Method for Distortion of Yarn in Woven Fabrics

D1424 Test Method for Tearing Strength of Fabrics by Falling-Pendulum (Elmendorf-Type) Apparatus

D1682 Test Method for Breaking Load and Elongation of Textile Fabric (Withdrawn 1992)<sup>3</sup>

D2262 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Traverse Tensile Testing Machine) (Withdrawn 1995)<sup>3</sup>

D2905 Practice for Statements on Number of Specimens for Textiles (Withdrawn 2008)<sup>3</sup>

D7022 Terminology Relating to Apparel<sup>3</sup>

### 2.2 AATCC Methods:<sup>4</sup>

TM8 Colorfastness to Crocking: Crockmeter Method

TM15 Colorfastness to Perspiration

TM16.3 Colorfastness to Light: Xenon-Arc

TM23 Colorfastness to Burnt Gas Fumes

TM61 Colorfastness to Laundering: Accelerated

TM96 Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics Except Wool

TM116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method

TM124 Smoothness Appearance of Fabrics After Repeated Home Laundering

TM132 Colorfastness to Drycleaning

TM135 Dimensional Changes of Fabrics After Home Laundering

TM158 Dimensional Changes on Drycleaning in Perchloroethylene: Machine Method

TM172 Colorfastness to Powdered Non-Chlorine Bleach in Home Laundering

TM188 Colorfastness to Sodium Hypochlorite Bleach in Home Laundering

EP1 Gray Scale for Color Change

EP2 Gray Scale for Staining

EP8 AATCC 9-Step Chromatic Transference Scale

<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.

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<sup>2</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* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

<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>.

2.3 Federal Standard<sup>5</sup>

16 CFR 1610, Chapter II Consumer Product Safety Commission Subchapter D-Flammable Fabrics Act Regulations

2.4 ASTM Adjuncts:

NOTE 1—Reference to test methods in this 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 For all terminology related to Apparel see Terminology D7022.

3.1.1 The following terms are relevant to this standard: scarf.

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 fabrics for woven neckties and scarfs shall conform to the specification requirements in Table 1.

5. Significance and Use

5.1 Upon mutual agreement between the purchaser and the seller, woven 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 D3785 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.

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

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

TABLE 1 Specification Requirements

NOTE 1—Grade in colorfastness requirements is based on a numerical scale of 5 for negligible or no color change, or color transfer to 1 for severe color change, or color transfer. A grade for fabric smoothness requirements is based on SA-5 for a very smooth, pressed, finished appearance to a grade of SA-1 crumpled, creased and severely wrinkled appearance.

Characteristic	Requirements	Section
Breaking strength (load) (CRT)	20 lbf (89 N), min	7.1
Yarn slippage	¼-in. (6.3-mm) separation at 15 lbf(67 N), min	7.2
Tongue tear strength	1.5 lbf (6.7 N), min	7.3
Yarn distortion:		7.4
Satis	0.10 in. (2.5 mm), min	
All other	0.05 in. (1 mm), min	
Dimensional change:		
After five launderings	3 % max	7.5.1
After three dry cleanings	2 % max	7.5.2
Colorfastness:		
Burnt gas fumes—2 cycles:		7.6.1
Shade change, original fabric	Grade 4 <sup>A</sup> min	
Shade change after one laundering or one dry cleaning	Grade 4 <sup>A</sup> min	
Sodium Hypochlorite Bleach	Grade 4 <sup>A</sup> min	7.6.7
Powdered Non-Chlorine Bleach	Grade 4 <sup>A</sup> min	7.6.8
Laundering: <sup>E</sup>		7.6.2
Shade change	Grade 4 <sup>A</sup> min	
Staining	Grade 3 <sup>B</sup> min	
Dry cleaning:		7.6.3
Shade change	Grade 4 <sup>A</sup> min	
Staining	Grade 3 <sup>B</sup> min	
Crocking: <sup>E</sup>		7.6.4
Dry	Grade 4 <sup>C</sup> min	
Wet	Grade 3 <sup>C</sup> min	
Perspiration: <sup>E</sup>		7.6.5
Shade change	Grade 4 <sup>A</sup> min	
Staining	Grade 3 <sup>B</sup> min	
Light (20 AFUs) (xenon-arc)	Grade 4 <sup>A</sup> min	7.6.6
Fabric appearance (see 7.7.1.1)	SA 3.5 <sup>D</sup> min	7.7
Flammability	Class 1	7.8

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

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

<sup>C</sup> AATCC 9-Step Chromatic Transference Scale

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

<sup>E</sup> See Note 7.

procedure 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) when 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 (See Note 1 and Note 1 in Table 1)

7.1 Breaking Strength (Load)—Determine the dry breaking strength, in the standard atmosphere for testing textiles, as directed in the grab test procedure of Test Methods D1682, using a constant-rate-of-traverse (CRT) tensile testing machine with the speed of the pulling jaw at 12 ± 0.5 in. (305 ± 13 mm)/min.

NOTE 2—If preferred, the use of a constant-rate-of-extension (CRE) tensile testing machine is permitted. The crosshead speed should be as agreed upon between the purchaser and the seller. There may be no overall correlation between the results obtained with the CRT machine. Consequently these two breaking load testers cannot be used interchangeably. In