

## Designation: D3785-95-Designation: D3785 - 02 (Reapproved 2008)

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

This standard is issued under the fixed designation D 3785; 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 (\$\epsilon\$) indicates an editorial change since the last revision or reapproval.

### 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.
- 1.4 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 and health practices and determine the applicability of regulatory limitations prior to use.

#### 2. Referenced Documents

- 2.1 ASTM Standards:<sup>2</sup>
- D 123 Terminology Relating to Textiles
- D 434 Test Method for Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam
- D 1336 Test Method for Distortion of Yarn in Woven Fabrics
- D 1424 Test Method for Tear Resistance Tearing Strength of Woven-Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus
- D 1682<del>Test</del> Methods of Test for Breaking Load and Elongation of Textile Fabrics
- D 2262 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Traverse Tensile Testing Machine)
- D 2724 Test Methods for Bonded, Fused, and Laminated Apparel Fabrics
- D 2905 Practice for Statements on Number of Specimens for Textiles
- 2.2 AATCC Methods:<sup>3</sup>
- 8-1974 Colorfastness to Crocking: AATCC Crockmeter Method
- 15-1976 Colorfastness to Perspiration
- 16-1974 Colorfastness to Light
- 23-1975 Colorfastness to Burnt Gas Fumes
- 61-1975 Colorfastness to Washing, Domestic, and Laundering, Commercial: Accelerated addd85/asim-d3785-022008
- 96-1975 Dimensional Changes in Laundering of Woven and Knitted Textiles Except Wool
- 116-1974 Colorfastness to Crocking: Rotary Vertical Crockmeter Method
- 124-1975 Appearance of Durable Press Fabrics After Repeated Home Launderings
- 132-1976 Colorfastness to Drycleaning
- 135-1973 Dimensional Changes in Automatic Home Laundering of Durable Press Woven or Knit Fabrics
- 172 Colorfastness to Non-Chlorine Bleach in Home Laundering
- 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 3 AATCC Chromatic Transference Scale

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.

<sup>&</sup>lt;sup>1</sup> This specification is under the jurisdiction of ASTM Committee D-13 on Textiles and is the direct responsibility of Subcommittee D13.61 on Apparel. Current edition approved May 15, 1995. Published July 1995. Originally published as D3785–79. Last previous edition D3785–92.

<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 Aug. 1, 2008. Published October 2008. Originally approved in 1979. Last previous edition approved in 2002 as D 3785 – 02.

<sup>2</sup> Annual Book of ASTM Standards, Vol 07.01.

<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.

Available from the American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709, http://www.aatcc.org.

### 3. Terminology

- 3.1 Definitions:
- 3.1.1 scarf—in apparel, an oblong or square piece of cloth worn for warmth or as a decorative item.
- 3.2 For definitions of textile terms used in this specification, refer to Terminology D 123 and the Technical Manual of the American Association of Textile Chemists and Colorists.<sup>3</sup>

### 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 D 3785 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.

Characteristic

#### **TABLE 1 Specification Requirements**

Note 1—Class in colorfastness and DP requirements is based on a numerical scale of 5 for negligible or no color change, color transfer, or fabric wrinkle to 1 for severe color change, color transfer, or fabric wrinkle.

Requirements

Section

Breaking strength (load) (CRT)         20 lbf (89 N), min         7.1           Yarn slippage         1/4-in. (6.3-mm) separation         7.2           Tongue tear strength         1/5 lbf (6.7 N), min         7.3           Yarn distortion:         7.4           Satins         0.10 in. (2.5 mm), min           All other         0.05 in. (1 mm), min           Dimensional change:         3 % max         7.5.1           After five launderings         3 % max         7.5.2           Colorfastness:         8 max         7.5.2           Burnt gas fumes—2 cycles:         7.6.1           Shade change, original fabric         Class 4 <sup>A</sup> min           Shade change after one laundering or one dry cleaning         Class 4 <sup>A</sup> min           Sodium Hypochlorite Bleach         Class 4 <sup>A</sup> min         7.6.7           Laundering:         7.6.8           Shade change         Class 4 <sup>A</sup> min         7.6.2           Shade change         Class 3 <sup>B</sup> min         7.6.3           Shade change         Class 4 <sup>A</sup> min         7.6.3           Shade change         Class 4 <sup>A</sup> min         7.6.4           Crocking:         7.6.4         7.6.5           Dry         Class 3 <sup>B</sup> min         7.6.5           Shade change	Ondradionolio	rioquiromonio	Cootion
At 15 lbf(67 N), min   7.3	Breaking strength (load) (CRT)	20 lbf (89 N), min	7.1
Tongue tear strength         1.5 lbf (6.7 N), min         7.3           Yarn distortion:         7.4           Satins         0.10 in. (2.5 mm), min           All other         0.05 in. (1 mm), min           Dimensional change:         After five launderings           After three dry cleanings         3 % max         7.5.1           After three dry cleanings         2 % max         7.5.2           Colorfastness:         8umt gas fumes—2 cycles:         7.6.1           Shade change, original fabric         Class 4 <sup>A</sup> min         7.6.1           Shade change after one laundering or one dry cleaning         Class 4 <sup>A</sup> min         7.6.7           Non-Chlorine Bleach         Class 4 <sup>A</sup> min         7.6.7           Non-Chlorine Bleach         Class 4 <sup>A</sup> min         7.6.8           Laundering:         7.6.2         7.6.2           Shade change         Class 4 <sup>A</sup> min         7.6.3           Staining         Class 4 <sup>A</sup> min         7.6.3           Shade change         Class 4 <sup>A</sup> min         7.6.4           Dry         Class 4 <sup>C</sup> min         7.6.5           Wet         Class 3 <sup>C</sup> min         7.6.5           Shade change         Class 3 <sup>C</sup> min         7.6.5           Shade change         Class 3 <sup>C</sup> min	Yarn slippage AS IM D3 /		7.2
Satins         0.10 in. (2.5 mm), min           All other         0.05 in. (1 mm), min           Dimensional change:         3 % max         7.5.1           After five launderings         3 % max         7.5.2           Colorfastness:         8 max         7.5.2           Colorfastness:         8 max         7.5.2           Burnt gas fumes—2 cycles:         7.6.1           Shade change, original fabric         Class 4 <sup>A</sup> min           Shade change after one laundering or one dry cleaning         Class 4 <sup>A</sup> min           Sodium Hypochlorite Bleach         Class 4 <sup>A</sup> min         7.6.7           Non-Chlorine Bleach         Class 4 <sup>A</sup> min         7.6.8           Laundering:         7.6.2         7.6.2           Shade change         Class 4 <sup>A</sup> min         7.6.2           Shade change         Class 4 <sup>A</sup> min         7.6.3           Shade change         Class 4 <sup>A</sup> min         7.6.4           Dry         Class 4 <sup>C</sup> min         7.6.4           Wet         Class 3 <sup>C</sup> min         7.6.5           Shade change         Class 4 <sup>A</sup> min         7.6.5           Shade change         Class 4 <sup>A</sup> min         7.6.5           Shade change         Class 3 <sup>C</sup> min         7.6.5           Shade cha			
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 furnes—2 cycles:     Shade change, original fabric Shade change after one laundering or one dry cleaning     Sodium Hypochlorite Bleach Class 4 <sup>A</sup> min 7.6.7      Non-Chlorine Bleach Class 4 <sup>A</sup> min 7.6.8  Laundering: 7.6.2  Shade change Class 4 <sup>A</sup> min 7.6.2  Shade change Class 4 <sup>A</sup> min 7.6.2  Shade change Class 4 <sup>A</sup> min 7.6.3  Staining Class 3 <sup>B</sup> min 7.6.3  Crocking: 7.6.4  Dry Class 4 <sup>C</sup> min 7.6.4  Perspiration: 7.6.5  Shade change Class 4 <sup>A</sup> min 7.6.5  Shade change Class 4 <sup>A</sup> min 7.6.6  Crocking: 7.6.4  Class 3 <sup>C</sup> min 7.6.5  Shade change Class 4 <sup>A</sup> min 7.6.6  Shade change Class 3 <sup>B</sup> min 7.6.6  Shade change Class 3 <sup>B</sup> min 7.6.6  Shade change Class 3 <sup>B</sup> min 7.6.6  Fabric appearance (see 7.7.1.1) DP 3.5 <sup>D</sup> min 7.7		0.10 in (0.5 mm) min	7.4
Dimensional change:         3 % max         7.5.1           After five launderings         3 % max         7.5.2           Colorfastness:         7.5.2           Burnt gas fumes—2 cycles:         7.6.1           Shade change, original fabric         Class 4 <sup>A</sup> min           Shade change after one laundering or one dry cleaning         Class 4 <sup>A</sup> min           Sodium Hypochlorite Bleach         Class 4 <sup>A</sup> min           Non-Chlorine Bleach         Class 4 <sup>A</sup> min           Laundering:         7.6.2           Shade change         Class 3 <sup>B</sup> min           Dry cleaning:         7.6.3           Shade change         Class 4 <sup>A</sup> min           Crocking:         7.6.4           Dry         Class 4 <sup>C</sup> min           Wet         Class 3 <sup>C</sup> min           Perspiration:         7.6.5           Shade change         Class 4 <sup>A</sup> min           Shade change         Class 4 <sup>A</sup> min           Shade change         Class 4 <sup>A</sup> min           Shade change         Class 3 <sup>B</sup> min           Perspiration:         7.6.5           Shade change         Class 3 <sup>B</sup> min           Staining         Class 3 <sup>B</sup> min           Light (20 AATCC FU) (xenon-arc)         Step 4 <sup>A</sup> min         7.6.6			
After five launderings         3 % max         7.5.1           After three dry cleanings         2 % max         7.5.2           Colorfastness:         7.5.2           Burnt gas fumes—2 cycles:         7.6.1           Shade change, original fabric         Class 4 <sup>A</sup> min           Shade change after one laundering or one dry cleaning         Class 4 <sup>A</sup> min           Sodium Hypochlorite Bleach         Class 4 <sup>A</sup> min           Non-Chlorine Bleach         Class 4 <sup>A</sup> min           Laundering:         7.6.2           Shade change         Class 3 <sup>B</sup> min           Staining         Class 3 <sup>B</sup> min           Dry cleaning:         7.6.3           Shade change         Class 4 <sup>A</sup> min           Crocking:         7.6.4           Dry         Class 4 <sup>C</sup> min           Wet         Class 3 <sup>C</sup> min           Perspiration:         7.6.5           Shade change         Class 4 <sup>A</sup> min           Staining         Class 3 <sup>B</sup> min           Light (20 AATCC FU) (xenon-arc)         Step 4 <sup>A</sup> min         7.6.6           Fabric appearance (see 7.7.1.1)         DP 3.5 <sup>D</sup> min         7.7		0.05 in. (1 mm), min	
After three dry cleanings 2 % max 7.5.2  Colorfastness:  Burnt gas furnes—2 cycles:  Shade change, original fabric  Shade change after one laundering or one dry cleaning  Sodium Hypochlorite Bleach  Non-Chlorine Bleach  Laundering:  Shade change  Staining  Dry cleaning:  Shade change  Class 4 <sup>A</sup> min  7.6.7  Class 4 <sup>A</sup> min  7.6.8  Class 4 <sup>A</sup> min  7.6.8  Class 4 <sup>A</sup> min  7.6.9  Class 4 <sup>A</sup> min  Class 3 <sup>B</sup> min  Crocking:  Dry  Class 4 <sup>A</sup> min  Class 4 <sup>A</sup> min  Class 3 <sup>C</sup> min  Perspiration:  Shade change  Class 4 <sup>A</sup> min  Class 3 <sup>C</sup> min  Perspiration:  Shade change  Class 4 <sup>A</sup> min  Class 3 <sup>C</sup> min  Perspiration:  Shade change  Class 4 <sup>A</sup> min  Staining  Class 3 <sup>B</sup> min  Light (20 AATCC FU) (xenon-arc)  Step 4 <sup>A</sup> min  7.6.6  Fabric appearance (see 7.7.1.1)  DP 3.5 <sup>D</sup> min  7.6.1		0.0/	754
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			
Burnt gas fumes—2 cycles:         7.6.1           Shade change, original fabric         Class 4 <sup>A</sup> min           Shade change after one laundering or one dry cleaning         Class 4 <sup>A</sup> min           Sodium Hypochlorite Bleach         Class 4 <sup>A</sup> min           Non-Chlorine Bleach         Class 4 <sup>A</sup> min           Laundering:         7.6.2           Shade change         Class 4 <sup>A</sup> min           Staining         Class 3 <sup>B</sup> min           Dry cleaning:         7.6.3           Shade change         Class 4 <sup>A</sup> min           Crocking:         7.6.4           Dry         Class 3 <sup>C</sup> min           Perspiration:         7.6.5           Shade change         Class 4 <sup>A</sup> min           Shade change         Class 4 <sup>A</sup> min           Staining         Class 3 <sup>B</sup> min           Light (20 AATCC FU) (xenon-arc)         Step 4 <sup>A</sup> min         7.6.6           Fabric appearance (see 7.7.1.1)         DP 3.5 <sup>D</sup> min         7.7		2 % max	7.5.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			7.6.1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Class 4A min	7.0.1
or one dry cleaning         Class 4 <sup>A</sup> min         7.6.7           Non-Chlorine Bleach         Class 4 <sup>A</sup> min         7.6.8           Laundering:         7.6.2           Shade change         Class 4 <sup>A</sup> min           Staining         Class 3 <sup>B</sup> min           Dry cleaning:         7.6.3           Shade change         Class 4 <sup>A</sup> min           Crocking:         7.6.4           Dry         Class 4 <sup>C</sup> min           Wet         Class 3 <sup>C</sup> min           Perspiration:         7.6.5           Shade change         Class 4 <sup>A</sup> min           Staining         Class 3 <sup>B</sup> min           Light (20 AATCC FU) (xenon-arc)         Step 4 <sup>A</sup> min         7.6.6           Fabric appearance (see 7.7.1.1)         DP 3.5 <sup>D</sup> min         7.7	0 , 0		
		Class 4 min	
Non-Chlorine Bleach         Class 4 <sup>A</sup> min         7.6.8           Laundering:         7.6.2         7.6.2           Shade change         Class 4 <sup>A</sup> min         7.6.2           Staining         Class 3 <sup>B</sup> min         7.6.3           Dry cleaning:         7.6.3         7.6.3           Shade change         Class 4 <sup>A</sup> min         7.6.4           Dry         Class 4 <sup>C</sup> min         7.6.4           Wet         Class 3 <sup>C</sup> min         7.6.5           Shade change         Class 4 <sup>A</sup> min         7.6.5           Shade change         Class 3 <sup>B</sup> min         Class 3 <sup>B</sup> min           Light (20 AATCC FU) (xenon-arc)         Step 4 <sup>A</sup> min         7.6.6           Fabric appearance (see 7.7.1.1)         DP 3.5 <sup>D</sup> min         7.7		Class 4A min	767
$ \begin{array}{ c c c c c }\hline \textbf{Laundering:} & & & & & & & \\\hline \textbf{Shade change} & & & & & & & \\ \textbf{Staining} & & & & & & & \\ \textbf{Staining} & & & & & & \\ \textbf{Class } 3^B \text{ min} & & & & \\ \textbf{Dry cleaning:} & & & & & \\ \textbf{Shade change} & & & & & \\ \textbf{Class } 4^A \text{ min} & & & \\ \textbf{Crocking:} & & & & & \\ \textbf{Dry} & & & & & \\ \textbf{Class } 4^C \text{ min} & & & \\ \textbf{Wet} & & & & & \\ \textbf{Class } 3^C \text{ min} & & & \\ \textbf{Perspiration:} & & & & & \\ \textbf{Shade change} & & & & \\ \textbf{Shade change} & & & & \\ \textbf{Shade change} & & & & \\ \textbf{Staining} & & & & \\ \textbf{Light } (20 \text{ AATCC FU}) \text{ (xenon-arc)} & & & \\ \textbf{Step } 4^A \text{ min} & & & \\ \textbf{Fabric appearance (see 7.7.1.1)} & & & & \\ \textbf{DP } 3.5^D \text{ min} & & & \\ \textbf{7.6.5} & & & \\ \textbf{Step } 4^A \text{ min} & & \\ \textbf{7.6.6} & & & \\ \textbf{Fabric appearance (see 7.7.1.1)} & & & \\ \textbf{DP } 3.5^D \text{ min} & & & \\ \textbf{7.7} & & & \\ \hline \end{array} $			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Class 4 IIIII	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	9	Class 4 <sup>A</sup> min	7.0.2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	•		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3	Olass 5 Tilli	763
$ \begin{array}{c cccc} \textbf{Crocking:} & \textbf{7.6.4} \\ \textbf{Dry} & \textbf{Class } \textbf{4}^C  \text{min} \\ \textbf{Wet} & \textbf{Class } \textbf{3}^C  \text{min} \\ \textbf{Perspiration:} & \textbf{7.6.5} \\ \textbf{Shade change} & \textbf{Class } \textbf{4}^A  \text{min} \\ \textbf{Staining} & \textbf{Class } \textbf{3}^B  \text{min} \\ \textbf{Light } (20  \text{AATCC FU})  (\text{xenon-arc}) & \textbf{Step } \textbf{4}^A  \text{min} \\ \textbf{Fabric appearance } (\text{see 7.7.1.1}) & \textbf{DP } \textbf{3.5}^D  \text{min} \\ \end{array} $	, ,	Class 1A min	7.0.5
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	•	01033 4 111111	764
Wet         Class 3 <sup>C</sup> min           Perspiration:         7.6.5           Shade change         Class 4 <sup>A</sup> min           Staining         Class 3 <sup>B</sup> min           Light (20 AATCC FU) (xenon-arc)         Step 4 <sup>A</sup> min         7.6.6           Fabric appearance (see 7.7.1.1)         DP 3.5 <sup>D</sup> min         7.7	9	Class 4 <sup>C</sup> min	7.0.4
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Class o Tilli	765
$\begin{array}{ccc} \text{Staining} & \text{Class } 3^B \min \\ \text{Light (20 AATCC FU) (xenon-arc)} & \text{Step } 4^A \min & 7.6.6 \\ \text{Fabric appearance (see 7.7.1.1)} & \text{DP } 3.5^D \min & 7.7 \\ \end{array}$	•	Class 4 <sup>A</sup> min	7.0.0
Light (20 AATCC FU) (xenon-arc) Step $4^A$ min 7.6.6 Fabric appearance (see 7.7.1.1) DP $3.5^D$ min 7.7	•		
Fabric appearance (see 7.7.1.1) DP $3.5^D$ min 7.7	3		766
		DP 3 5 <sup>D</sup> min	
	Flammability	pass	7.8

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

<sup>&</sup>lt;sup>B</sup> AATCC Gray Scale for Staining.

<sup>&</sup>lt;sup>C</sup> AATCC Chromatic Transference Scale

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