



Designation: D 3780 – 95a

Standard Performance Specification for Men's and Boys' Woven Dress Suit Fabrics and Woven Sportswear Jacket, Slack, and Trouser Fabrics¹

This standard is issued under the fixed designation D 3780; 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 (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This performance specification covers men's and boys' woven dress suit fabrics and woven sportswear jacket, slack, and trouser 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 safety hazards caveat pertains only to the test method described in 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:

- D 123 Terminology Relating to Textiles²
- D 434 Test Method for Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam²
- D 1424 Test Method for Tear Resistance of Woven Fabrics by Falling-Pendulum (Elmendorf) Apparatus²
- D 2261 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Extension Tensile Testing Machine)²
- D 2262 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant Rate-of-Traverse Tensile Testing Machine)²
- D 2724 Test Methods for Bonded, Fused, and Laminated Apparel Fabrics²
- D 2905 Practice for Statements on Number of Specimens for Textiles²
- D 5034 Test Method for Breaking Force and Elongation of Textile Fabrics (Grab Test)³

2.2 AATCC Test Methods:⁴

- 8 Colorfastness to Crocking: AATCC Crockmeter Method
 - 15 Colorfastness to Perspiration
 - 16 Colorfastness to Light
 - 23 Colorfastness to Burnt Gas Fumes
 - 61 Colorfastness to Washing, Domestic, and Laundering, Commercial: Accelerated
 - 96 Dimensional Changes in Laundering of Woven and Knitted Textiles Except Wool
 - 116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method
 - 119 Color Change Due to Flat Abrasion (Frosting): Screen Wire Method
 - 124 Appearance of Durable Press Fabrics After Repeated Home Launderings
 - 132 Colorfastness to Drycleaning
 - 135 Dimensional Changes in Automatic Home Laundering of Durable Press Woven or Knit Fabrics
 - Evaluation Procedure 1 Gray Scale for Color Change
 - Evaluation Procedure 2 Gray Scale for Staining
 - Evaluation Procedure 3 AATCC Chromatic Transference Scale
- #### 2.3 Federal Standards:-
- 16 CFR 1610 Standard for Flammability of Clothing Textiles⁵
 - 16 CFR, Chapter II—Consumer Product Safety Commission, Subchapter D—Flammable Fabrics Act Regulations⁵
- #### 2.4 Military Standard:
- MIL-STD-105D Sampling Procedures and Tables for Inspection by Attributes⁶

NOTE 1—Reference to test methods in this specification gives 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 **Definitions**—For definitions of textile terms used in this specification, refer to the individual ASTM and AATCC test methods and to Terminology D 123. Definitions found in a

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² Annual Book of ASTM Standards, Vol 07.01.

³ Annual Book of ASTM Standards, Vol 07.02.

⁴ Available from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

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

⁶ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.



TABLE 1 Specification Requirements

NOTE 1—Class in a, b, c, and DP rating is based on a numerical scale of 5 for negligible or no color change, color transfer, or wrinkle to 1 for severe color change, color transfer, or wrinkle. The numerical rating in Table 1 or a higher numerical rating is acceptable.

Characteristic	Requirements		Section
	Suit, Slack, Trouser	Jacket	
Breaking strength (load) (CRT):			7.1
Worsted count yarns	178 N (40 lbf), min	133 N (30 lbf), min	
Cotton count yarns	178 N (40 lbf), min	133 N (30 lbf), min	
Woolen run yarns	133 N (30 lbf), min	111 N (25 lbf), min	
Yarn slippage	6.3-mm (¼-in.) separation at 111 N (25 lbf), min	89 N (20 lbf), min	7.2
Tear strength	11 N (2.5 lbf), min	9 N (2 lbf)	7.3
Dimensional Change:			
Pressing and finishing (in each direction)	2 % max	2 % max	7.4.1
After five launderings (in each direction)	3 % max	3 % max	7.4.2
After three dry cleanings (in each direction)	2 % max	2 % max	7.4.3
Colorfastness:			
Burnt gas fumes—2 cycles:			
Shade change, original fabric	Class 4 ^A min	Class 4 ^A min	7.5.1
Shade change after one laundering or one dry cleaning	Class 4 ^A min	Class 4 ^A min	
Laundering:			
Shade change	Class 4 ^A min	Class 4 ^A min	7.5.2
Staining	Class 3 ^B min	Class 3 ^B min	
Dry cleaning:			
Shade change	Class 4 ^A min	Class 4 ^A min	7.5.3
Crocking:			
Dry	Class 4 ^C min	Class 4 ^C min	7.5.4
Wet	Class 3 ^C min	Class 3 ^C min	
Perspiration:			
Shade change	Class 4 ^A min	Class 4 ^A min	7.5.5
Staining	Class 3 ^B min	Class 3 ^B min	
Light (40 AATCC FU) (xenon-arc)	Step 4 ^A min	Step 4 ^A min	7.5.6
Frosting	Class 4 ^A min	Class 4 ^A min	7.5.7
Fabric appearance (See 7.6.1.1)	DP 3.5 ^D min	DP 3.5 ^D min	7.6
Flammability	Class 1 or Class 2	Class 1 or Class 2	7.6

^A AATCC Gray Scale for Color Change.

^B AATCC Gray Scale for Staining.

^C AATCC Chromatic Transference Scale.

^D For durable-press fabrics only.

dictionary of common terms are suitable for terms used in this specification.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *pressing and finishing*—this term takes into account all of the industrial pressing and finishing treatments used in garment production.

NOTE 2—No standard test method is available for reproducing on a laboratory level the results of industrial press or finish treatments, or both, used in the manufacture of woven outerwear garments.⁷

4. Specification Requirements

4.1 The properties of fabrics for men's and boys' woven dress suits and woven sportswear jackets, slacks, and trousers shall conform to the specification requirements in Table 1.

5. Significance and Use

5.1 Upon mutual agreement between the purchaser and the supplier, 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 supplier.

5.2.1 In such cases, any references to the specification shall specify that: This fabric meets Specification D 3780 except for the following characteristic(s).

5.3 Where no prepurchase agreement has been reached between the purchaser and the supplier, 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 *Acceptance Testing Lot*—Unless there is prior agreement, consider as a lot for acceptance testing all material of a single item received as a single shipment.

6.2 *Lot Sample*—As a lot sample for acceptance testing, take at random the number of rolls as directed in an applicable specification or other agreement between the purchaser and the supplier, such as an agreement to use MIL-STD-105D.

6.3 *Laboratory Sample*—From each roll or piece in the lot sample, cut two laboratory samples the full width of the fabric

⁷ The development of a standard test method has been referred to Subcommittee D13.59 on Fabric Test Methods, General.