



Designation: D3780 – 22

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 D3780; 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, 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:²

D123 Terminology Relating to Textiles

D434 Test Method for Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam (Withdrawn 2003)³

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.

Current edition approved Nov. 1, 2022. Published November 2022. Originally approved in 1979. Last previous edition approved in 2014 as D3780 – 14. DOI: 10.1520/D3780-22.

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.

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

D2261 Test Method for Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure (Constant-Rate-of-Extension Tensile Testing Machine)

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Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Traverse Tensile Testing Machine) (Withdrawn 1995)³

D2724 Test Method for Bond Strength of Bonded, Fused, and Laminated Apparel Fabrics

D2905 Practice for Statements on Number of Specimens for Textiles (Withdrawn 2008)³

D5034 Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)

D7022 Terminology Relating to Apparel (Withdrawn 2022)³

2.2 AATCC Test Methods:⁴

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

TM119 Color Change Due to Flat Abrasion (Frosting): Screen Wire Method

TM124 Smoothness Appearance of Fabrics After Repeated Home Laundering

TM132 Colorfastness to Drycleaning

TM135 Dimensional Changes of Fabrics After Home Laundering

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

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

M11 A Glossary of AATCC Standard Terminology

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 For all terminology related to Apparel, see Terminology D7022.

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.

3.1.1 The following terms are relevant to this standard: pressing and finishing.

3.2 For definitions of all other textile terms, see Terminology D123.

3.3 For terms relating to chemical or colorfastness testing, refer to specific AATCC test methods or the glossary of AATCC Standard Terminology, or both.

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

TABLE 1 Specification Requirements

NOTE 1—Grade in a, b, c, and SA 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
Worst 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	Grade 4 ^A min	Grade 4 ^A min	7.5.1
Shade change after one laundering or one dry cleaning	Grade 4 ^A min	Grade 4 ^A min	
Sodium Hypochlorite Bleach	Grade 4 ^A min	Grade 4 ^A min	7.5.8
Powdered Non-Chlorine Bleach	Grade 4 ^A min	Grade 4 ^A min	7.5.9
Laundering: ^E			
Shade change	Grade 4 ^A min	Grade 4 ^A min	7.5.2
Staining	Grade 3 ^B min	Grade 3 ^B min	
Dry cleaning:			
Shade change	Grade 4 ^A min	Grade 4 ^A min	7.5.3
Crocking: ^E			
Dry	Grade 4 ^C min	Grade 4 ^C min	7.5.4
Wet	Grade 3 ^C min	Grade 3 ^C min	
Perspiration: ^E			
Shade change	Grade 4 ^A min	Grade 4 ^A min	7.5.5
Staining	Grade 3 ^B min	Grade 3 ^B min	
Light (40 AFUs) (xenon-arc)	Grade 4 ^A min	Grade 4 ^A min	7.5.6
Frosting	Grade 4 ^A min	Grade 4 ^A min	7.5.7
Fabric smoothness appearance (See 7.6.1)	SA 3.5 ^D min	SA 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 9-Step Chromatic Transference Scale.

^D For easy-care fabrics only.

^E See Note 8.