



Designation: ~~D3782~~—14 D3782 – 22

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

This standard is issued under the fixed designation D3782; 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 (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This performance specification covers men's and boys' knitted dress suit and knitted 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 knitted 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 *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

[ASTM D3782-22](#)

<https://standards.iteh.ai/catalog/standards/sist/81f6a34b-c3f0-4bf4-bc52-85ba800aa1cd/astm-d3782-22>

2.1 ASTM Standards:²

~~D123~~ Terminology Relating to Textiles

~~D231~~ Methods of Testing Tolerances for Knit Goods; Replaced by D 3887 (Withdrawn 1980)³

~~D2594~~ Test Method for Stretch Properties of Knitted Fabrics Having Low Power

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~~D2905~~ Practice for Statements on Number of Specimens for Textiles (Withdrawn 2008)³

~~D7022~~ Terminology Relating to Apparel³

2.2 AATCC Methods:⁴

~~8TM8~~ Colorfastness to Crocking: Crockmeter Method

~~15TM15~~ Colorfastness to Perspiration

~~16.3TM16.3~~ Colorfastness to Light: Xenon-Arc

~~23TM23~~ Colorfastness to Burnt Gas Fumes

~~61TM61~~ Colorfastness to Laundering: Accelerated

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 Feb. 1, 2014/Nov. 1, 2022. Published March 2014/November 2022. Originally approved in 1979. Last previous edition approved in 2013/2014 as D3782 – 13/D3782 – 14. DOI: 10.1520/D3782-14.10.1520/D3782-22.

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.

⁴ Available from American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709, <http://www.aatcc.org>.

- [96TM96](#) Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics Except Wool
- [H6TM116](#) Colorfastness to Crocking: Rotary Vertical Crockmeter Method
- [I24TM124](#) Smoothness Appearance of Fabrics After Repeated Home Laundering
- [I32TM132](#) Colorfastness to Drycleaning
- [I35TM135](#) Dimensional Changes of Fabrics after Home Laundering
- [I72TM172](#) Colorfastness to Powdered Non-Chlorine Bleach in Home Laundering
- [I88TM188](#) Colorfastness to Sodium Hypochlorite Bleach in Home Laundering
- ~~Evaluation Procedure 1EP1~~ [Gray Scale for Color Change](#)
- ~~Evaluation Procedure 2EP2~~ [Gray Scale for Staining](#)
- ~~Evaluation Procedure 8EP8~~ [AATCC 9-Step Chromatic Transference Scale](#)

NOTE 1—Reference to test methods used 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](#).

3.1.1 The following terms are relevant to this standard: dimensional change, 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 fabrics for men's and boys' knitted dress suits and sportswear jackets, slacks, and trousers shall conform to the specification requirements in [Table 1](#).

5. Significance and Use

5.1 Knitted fabrics should meet all of the requirements in [Table 1](#) to be suitable for use in the manufacture of dress suits and sportswear jackets, slacks, and trousers for men and boys.

5.2 It is recognized that for purposes of fashion or aesthetics the ultimate consumer of articles made from these fabrics may find acceptable some fabrics that do not conform to all of the requirements in [Table 1](#). For example, the fabric could be dyed in shades that do not meet the requirement in [Table 1](#) for colorfastness to light, yet be acceptable to the ultimate consumer because the shade is fashionable. In such cases, one or more of the requirements may be modified by mutual agreement between the purchaser and the seller.

5.2.1 If any of the requirements in [Table 1](#) are modified by mutual agreement between the purchaser and the seller, any reference to the specification shall specify that “this fabric meets ASTM Specification D3782 except for the following characteristic(s).”

5.3 The uses and significance of particular properties are discussed in the appropriate sections of the specific 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 should first be processed in accordance with the fabric manufacturer's instructions.

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) when using a reliable estimate of variability of individual observations on similar materials in the user's laboratory under conditions of single-operator precision.

TABLE 1 Specification Requirements

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

Characteristic	Requirements	Section
Bursting strength (load) (ball burst)	50 lbf (222 N)	7.1
Dimensional change:		
Pressing and finishing	2 % max	7.2.2
After five launderings	3 % max	7.2.1
After three dry cleanings	2 % max	7.2.3
Growth	3 % max	7.2.4
Colorfastness:		
Burnt gas fumes—2 cycles:		7.3.1
Shade change, original fabric	Grade 4 ^A min	
Shade change after one laundering or one dry cleaning	Grade 4 ^A min	
Sodium Hypochlorite Bleach	Grade 4 ^A min	7.3.7
Powdered Non-Chlorine Bleach	Grade 4 ^A min	7.3.8
Laundering: ^E		7.3.2
Shade change	Grade 4 ^A min	
Staining	Grade 3 ^B min	
Dry cleaning:		7.3.3
Shade change	Grade 4 ^A min	
Crocking: ^E		7.3.4
Wet	Grade 4 ^C min	
Dry	Grade 3 ^C min	
Perspiration (acid phase): ^E		7.3.5
Shade change	Grade 4 ^A min	
Staining	Grade 3 ^B min	
—Light (40 AATCC Fading Unit) (xenon-arc)	Grade 4 ^A min	7.3.6
Light (40 AFUs) (xenon-arc)	Grade 4 ^A min	7.3.6
Fabric appearance (see 7.4.1.1)	SA 3.5 ^D min	7.4
Flammability	pass	7.5
Flammability	Class I	7.5

^A AATCC Gray Scale for Color Change.

^B AATCC Gray Scale for Staining.

^C AATCC Chromatic Transference Scale.

^D For durable-press fabrics only.

^E See Note 7.

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7. Test Methods (See Note 1)

7.1 *Bursting Strength*—Determine the bursting strength, in the standard atmosphere for testing textiles, as directed in Method D231 using an approved type of constant-rate-of-traverse (CRT) machine equipped with a bursting attachment or an approved type of diaphragm bursting tester as agreed upon between the purchaser and the seller.

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, the CRT machine equipped with a bursting attachment method 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 Manufacturing*—Mark specimen(s) as directed in 4.3.1 of AATCC Method 135. TM135. Press and finish specimen(s) as agreed upon between the purchaser and the seller with respect to time cycles, temperature, steam, vacuum, and mechanical pressure of the press head. Measure the specimen(s) and calculate the dimensional change as directed in Sections 6 and 7 of AATCC Method 135. AATCC TM135.

7.2.1.1 If no agreement has been made between the purchaser and the seller, press the specimen(s) using a flat-bed steam press according to the cycle in 10.1.3.1 through 10.1.3.5 of Test Methods Test Method D2724.