



Designation: **D4119–01 (Reapproved 2008) D4119 – 14**

## Standard Performance Specification for Men's and Boys' Knitted Dress Shirt Fabrics<sup>1</sup>

This standard is issued under the fixed designation D4119; 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 knitted fabrics comprised of any textile fiber or mixture of fibers, used in men's and boys' dress shirts.

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

1.3 These requirements apply to both 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 and health practices and determine the applicability of regulatory limitations prior to use.*

### 2. Referenced Documents

#### 2.1 ASTM Standards:<sup>2</sup>

[D123 Terminology Relating to Textiles](#)

[D2594 Test Method for Stretch Properties of Knitted Fabrics Having Low Power](#)

[D2724 Test Methods for Bonded, Fused, and Laminated Apparel Fabrics](#)

[D3786 Test Method for Bursting Strength of Textile Fabrics—Diaphragm Bursting Strength Tester Method](#)

[D3787 Test Method for Bursting Strength of Textiles—Constant-Rate-of-Traversal \(CRT\) Ball Burst Test](#)

[D7022 Terminology Relating to Apparel](#)

#### 2.2 AATCC Methods:<sup>3</sup>

[8 Colorfastness to Crocking: AATCC Crockmeter Method](#)

[15 Colorfastness to Perspiration](#)

[16.3 Colorfastness to Light: Xenon-Arc](#)

[23 Colorfastness to Burnt Gas Fumes](#)

[61 Colorfastness to Washing, Domestic, and Laundering, Commercial: Laundering: Accelerated](#)

[96 Dimensional Changes in Laundering of Woven and Knitted Textiles Except Wool](#)

[116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method](#)

[124 Smoothness Appearance of Durable-Press Fabrics after Repeated Home Launderings](#)

[132 Colorfastness to Drycleaning](#)

[135 Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics of Fabrics after Home Laundering](#)

[172 Colorfastness to Powdered Non-chlorine Bleach in Home Laundering](#)

[188 Colorfastness to Chlorine Sodium Hypochlorite Bleach in Home Laundering](#)

[Evaluation Procedure No. 1 Gray Scale For Color Change](#)

[Evaluation Procedure No. 2 Gray Scale for Staining](#)

[Evaluation Procedure No. 38 AATCC 9-Step Chromatic Transference Scale](#)

[A Glossary of AATCC Standard Terminology](#)

#### 2.3 Federal Standard:<sup>4</sup>

[16 CFR, Chapter II—Consumer Product Safety Commission Subchapter D—Flammable Fabrics Act Regulations](#)

<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; Feb. 1, 2014. Published October 2008; March 2014. Originally approved in 1982. Last previous edition approved in 2004 as D4119–01; D4119–01(2008). DOI: 10.1520/D4119-01R08; 10.1520/D4119-14.

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

<sup>4</sup> Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402.

## 2.4 Military Standard:<sup>5</sup>

### MIL-STD-105D Sampling Procedures and Tables for Inspection by Attributes

NOTE 1—Reference to test methods in this performance 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 Definitions:

3.1.1 *dimensional change, n—in pressing and finishing of textiles*, the change in dimensions of a fabric caused by pressing and finishing during garment manufacture.

3.1.2 For definitions of other textile terms used in this performance specification, refer to the individual ASTM and AATCC methods and to Terminology [D123](#).

3.1 For all terminology related to Apparel, see Terminology [D7022](#).

3.1.1 The following term is relevant to this standard: dimensional change.

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 method, or the Glossary of AATCC Standard Terminology.

3.4 Definitions of terms found in a dictionary of common terms are suitable for this performance specification.

### 3.5 Definitions of Terms Specific to This Standard:

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

NOTE 2—No method is available for reproducing on a laboratory level the results of industrial press or finishing treatments, or both, used in the manufacture of garments.

3.3 Definitions of terms found in a dictionary of common terms are suitable for this performance specification.

## 4. Specification Requirements

4.1 The properties of fabrics for men's and boy's knitted dress shirts shall conform to the specification requirements in [Table 1](#).

## 5. Significance and Use

5.1 Upon agreement between the purchaser and the seller, fabrics intended for this end use should meet all of the requirements listed in [Table 1](#) of this performance 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 upon 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 D4119 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 uses and significance of particular properties and methods are discussed in the appropriate sections of the specified methods.

## 6. Sampling

6.1 *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.

6.2 *Laboratory Sample*—From each roll or piece in the lot sample, cut two laboratory samples the full width of the fabric and at least 375 mm (15 in.) along the selvage.

## 7. Test Method (See [Note 1](#))

7.1 *Bursting Strength*—Determine the bursting strength, in the standard atmosphere for testing textiles, as directed in Test Method [D3787](#) using an approved type of constant-rate-of-traverse (CRT) machine equipped with a bursting attachment or Test Method [D3786](#) using an approved type of diaphragm bursting tester as agreed upon between the purchaser and the seller.

<sup>5</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.