



Designation: D 3994 – 95a

## Standard Performance Specification for Woven Swimwear Fabrics<sup>1</sup>

This standard is issued under the fixed designation D 3994; 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 fabrics for use in men's, women's and children's swimwear, composed of any textile fiber or mixture of textile fibers.

1.2 These requirements apply to the length and width directions for those properties where fabric direction is pertinent.

1.3 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 Textiles<sup>2</sup>
  - D 434 Test Method for Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam<sup>2</sup>
  - D 1284 Test Methods for Relaxation and Consolidation Dimensional Changes of Stabilized Knit Wool Fabrics<sup>2</sup>
  - D 1424 Test Method for Tear Resistance of Woven Fabrics by Falling-Pendulum (Elmendorf) Apparatus<sup>2</sup>
  - D 2261 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Extension) Tensile Testing Machine<sup>2</sup>
  - D 2262 Test Method for Tearing Strength of Woven Fabrics by Tongue (Single Rip) Method (Constant-Rate-of-Traverse Tensile Testing Machine)<sup>2</sup>
  - D 2905 Practice for Statements on Number of Specimens for Textiles<sup>2</sup>
  - D 5034 Test Method for Breaking Force and Elongation of Textile Fabrics (Grab Test)<sup>3</sup>
- #### 2.2 AATCC Test Methods:<sup>4</sup>
- 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
- 106 Colorfastness to Water: Sea
- 107 Colorfastness to Water
- 116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method
- 129 Colorfastness to Ozone in the Atmosphere Under High Humidities
- 135 Dimensional Changes in Automatic Home Laundering of Durable Press Woven or Knit Fabrics
- 162 Colorfastness to Water: Chlorinated Pool Evaluation Procedure No. 1 Gray Scale for Color Change Evaluation Procedure No. 2 Gray Scale for Staining Evaluation Procedure No. 3 AATCC Chromatic Transference Scale.

#### 2.3 Federal Standard:

- 16 CFR 1610 Standard for Flammability of Clothing Textiles<sup>5</sup>
  - 16 CFR, Chapter II—Consumer Product Safety Commission, Subchapter D—Flammable Fabrics Act Regulations<sup>5</sup>
- #### 2.4 Military Standard:
- MIL-STD-105D Sampling Procedures and Tables for Inspection by Attributes<sup>6</sup>

NOTE 1—Reference to test methods in this standard 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 *swimwear, n*—textile garments intended for wear in fresh, chlorinated, or salt water.
- 3.2 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 dictionary of common terms are suitable for terms used in this specification.

### 4. Specification Requirements

- 4.1 The properties of fabrics for woven swimwear shall conform to the specification requirements in Table 1.

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

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

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

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 07.02.

<sup>4</sup> Available from American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, N.C. 27709.