



Designation: D 6554 – 00

Standard Performance Specification for 100 % Cotton Denim Fabrics¹

This standard is issued under the fixed designation D 6554; 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 specification covers performance requirements for 100 % cotton woven denim fabrics used in the manufacture of jeans, casual apparel, work clothing, and outerwear.

1.2 This performance specification is not applicable to woven denim fabrics used as interlinings or protective clothing.

1.3 This standard covers the performance of denim fabric on rolls ready for garment manufacturing.

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 to 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 Yarn in Woven Fabrics Using a Standard Seam²
- D 1230 Test Method for Flammability of Apparel Textiles²
- D 1424 Test Method for Tearing Strength of Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus²
- D 3107 Test Method for Stretch Properties of Woven Fabrics from Stretch Yarns³
- D 3774 Test Method for Width of Woven Fabric⁴
- D 3776 Test Methods for Mass per Unit Area (Weight) of Woven Fabric⁴
- D 3882 Test Method for Bow and Skewness in Woven and Knitted Fabrics⁴
- D 5034 Test Method for Breaking Force and Elongation of Textile Fabrics (Grab Test)⁴

2.2 AATCC Standards⁵:

- Test Method 8 Colorfastness to Crocking: AATCC Crockmeter Method
- Test Method 16(Option E) Colorfastness to Light: Water-

- Cooled Xenon-Arc Lamp, Continuous Light
- Test Method 61 Colorfastness to Laundering, Home and Commercial: Accelerated
- Test Method 109 Colorfastness to Ozone in the Atmosphere Under Low Humidities
- Test Method 116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method
- Test Method 135 Dimensional Changes in Automatic Home Laundering of Woven or Knit Fabrics
- Evaluation Procedure 1 Gray Scale for Color Change
- Evaluation Procedure 2 Gray Scale for Staining
- Evaluation Procedure 8 AATCC—9 Step Chromatic Transference Scale
- 2.3 *Federal Standard:*
 - 16 CFR 16.10, Chapter II, Subchapter D—Flammable Fabrics Act Regulations⁶
- 2.4 *Other Document:*
 - Glossary of AATCC Standard Terminology⁵

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 edition of each test method cited shall prevail.

3. Terminology

3.1 Definitions:

3.1.1 *denim, n*—a durable woven twill fabric, usually of all cotton or a blend of cotton and manufactured fibers, made from a variety of yarn numbers, and in various fabric weights, colors, designs, and finishes.

3.1.2 *indigo dyed, adj*—a condition of the yarn after being colored with a blue dye from the indigo plant or synthetic process.

3.1.3 *jeans, n*—pants or slacks made from denim fabrics.

3.2 For definitions of other textile terms used in this specification, refer to Terminology D 123 and the Glossary of AATCC Standard Terminology.

3.3 Definitions of Terms Specific to This Standard:

3.3.1 *heavy-weight, adj*—fabric mass (weight) of 466 g/m² (13.75 oz/yd²) or greater.

3.3.2 *light-weight, adj*—fabric mass (weight) of 271 g/m² (8.00 oz/yd²) or less.

3.3.3 *medium-weight, adj*—fabric mass (weight) of 272 g/m²– 465 g/m² (8.01 oz/yd²– 13.74 oz/yd²).

¹ This test method is under the jurisdiction of ASTM Committee D13 on Textiles and is direct responsibility of Subcommittee D13.61 on Apparel.

Current edition approved June 10, 2000. Published September 2000.

² *Annual Book of ASTM Standards*, Vol 07.01.

³ Discontinued; See 1998 *Annual Book of ASTM Standards*, Vol 07.01.

⁴ *Annual Book of ASTM Standards*, Vol 07.02.

⁵ Available from the American Association of Textile Colorists and Chemists, PO Box 12215, Research Triangle Park, NC 27709.

⁶ Available from US Government Printing Office, Washington, DC 20402.