



Designation: D 5431 – 93

Standard Performance Specification for Woven and Knitted Sheeting Products for Institutional and Household Use¹

This standard is issued under the fixed designation D 5431; 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 the evaluation of specific performance characteristics of importance in woven and knit flat, fitted, and waterbed sheet products for use in institutional and household environments.

1.2 This specification may be used by mutual agreement between the purchaser and the supplier to establish purchasing specification requirements.

1.3 The requirements in Table 1 apply to the length and width directions for those properties where fabric direction is pertinent.

1.4 This specification is not applicable to woven and knit products used for sheet blankets or to woven and knitted sheet products used for apparel.

1.5 *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 Textiles²
- D 629 Test Methods for Quantitative Analysis of Textiles²
- D 1230 Test Method for Flammability of Textiles²
- D 1424 Test Method for Tear Resistance of Woven Fabrics by Falling Pendulum (Elmendorf) Apparatus²
- D 1776 Practice for Conditioning Textiles for Testing²
- D 2262 Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Traversal Tensile Testing Machine)²
- D 2905 Practice for Statements on Number of Specimens for Textiles²
- D 3136 Terminology for Permanent Care Labels for Consumer Textile and Leather Products Other than Carpets and Upholstery²
- D 3512 Test Method for Pilling Resistance and Other Related Surface Changes of Textile Fabrics: Random Tumble

¹ This specification is under the jurisdiction of ASTM Committee D-13 on Textiles and is the direct responsibility of Subcommittee D13.63 on Home Furnishings.

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² Annual Book of ASTM Standards, Vol 07.01.

Pilling Tester Method³

D 3786 Test Method for Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics—Diaphragm Bursting Strength Tester Method³

D 3787 Test Method for Bursting Strength of Knitted Goods Constant-Rate-of-Traversal (CRT) Ball Burst Test³

D 3882 Test Method for Bow and Skewness in Woven and Knitted Fabrics³

D 3938 Guide for Evaluation of Textile Products in Relation to Refurbishing Described on Care Labels³

D 5034 Test Method for Breaking Force and Elongation of Textile Fabrics (Grab Test)³

2.2 AATCC Methods:⁴

8 Colorfastness to Crocking: AATCC Crockmeter Method

15 Colorfastness to Perspiration

16A Colorfastness to Light: Carbon-Arc Lamp, Continuous Light

16E Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light

61 Colorfastness to Laundering, Home, and Commercial: Accelerated

88B Appearance of Seams in Durable Press Items After Repeated Home Launderings

96 Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics Except Wool

116 Colorfastness to Crocking: Rotary Vertical Crockmeter Method

124 Appearance of Fabrics After Repeated Home Laundering

135 Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics

143 Appearance of Apparel and Other Textile End Products After Repeated Home Launderings

Evaluation Procedure 1 Gray Scale for Color Change

Evaluation Procedure 2 Gray Scale for Staining

Evaluation Procedure 3 AATCC Chromatic Transference Scale

NOTE 1—Reference to test methods in this specification give only the pertinent part of the designation of ASTM, AATCC, or other test methods. The current edition of each test method shall prevail.

³ Annual Book of ASTM Standards, Vol 07.02.

⁴ Available from American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709.