



Designation: D6321/D6321M – 22

Standard Practice for the Evaluation of Machine Washable T-Shirts¹

This standard is issued under the fixed designation D6321/D6321M; 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 practice covers test methods and procedures used to evaluate important characteristics of machine washable T-shirts. T-shirts may be made of knitted fabric composed of any textile fiber(s) or blend of fibers and intended to be used as underwear or as an outer garment.

1.2 T-shirts' characteristics may be assessed either as a final product or at any intermediate processing stage.

1.3 This practice excludes T-shirts intended for hand washing or dry cleaning care.

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *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

2.1 ASTM Standards:²

D123 Terminology Relating to Textiles

D1776 Practice for Conditioning and Testing Textiles

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-Traverse (CRT) Ball Burst Test

D3887 Specification for Tolerance for Knitted Fabrics (Withdrawn 2017)³

D3940 Test Method for Bursting Strength (Load) and Elongation of Sewn Seams of Knit or Woven Stretch Textile Fabrics (Withdrawn 1995)³

D4154 Performance Specification for Men's and Boys' Knitted and Woven Beachwear and Sports Shirt Fabrics

D4156 Performance Specification for Women's and Girls' Knitted Sportswear Fabrics

D7022 Terminology Relating to Apparel

2.2 AATCC Test Methods:⁴

EP1, Gray Scale for Color Change

EP2, Gray Scale for Staining

EP7, Instrumental Assessment of the Change in Color of a Textile Specimen

TM7, Colorfastness to Water

TM150, Dimensional Changes of Garments after Home Laundering

TM172, Colorfastness to Powered Non-Chlorine Bleach in Home Laundering

TM179, Skew Change in Fabrics After Home Laundering

2.3 Other AATCC Documents:

M11 Glossary of AATCC Standard Terminology⁴

LP1 Home Laundering: Machine Washing

3. Terminology

3.1 For all terminology relating to D13.61, Apparel, refer to Terminology D7022.

3.1.1 The following terms are relevant to this standard: T-shirt.

3.1.2 For definitions of other textile terms used in this standard, refer to terminology in Terminology D123 and Glossary of AATCC Standard Terminology.

4. Significance and Use

4.1 This practice may be used to evaluate pertinent characteristics of washable T-shirts.

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

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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 AATCC, PO Box 12215, Research Triangle Park, NC 27709.