



Designation: D 6321 – 98

Standard Practice for the Evaluation of Machine Washable T-Shirts¹

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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 in SI units are to be regarded as the standard. The values given in parentheses are provided for information only.

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 1776 Practice for Conditioning Textiles for Testing²

D 3136 Terminology Relating to Care Labels for Textile and Leather Products Other Than Textile Floor Coverings and Upholstery²

D 3786 Test Method for Hydraulic Brushing 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-Transverse (CRT), Ball Burst Test⁴

D 3887 Specifications for Tolerances for Knitted Fabrics⁴

D 3940 Test Method for Bursting Strength and Elongation of Sewn Seams of Knit or Woven Textile Fabrics³

D 4154 Performance Specification for Men's and Boys'

Knitted and Woven Beachwear and Sports Shirt Fabrics⁴
D 4156 Performance Specification for Women's and Girls' Knitted Sportswear Fabrics⁴

2.2 AATCC Test Methods:

Evaluation Procedure 1, Gray Scale for Color Change⁵

Evaluation Procedure 2, Gray Scale for Staining⁵

Evaluation Procedure 7, Instrumental Assessment of the Change in Color of a Textile Specimen⁵

Method 107, Colorfastness to Water⁵

Method 150, Dimensional Changes in Automatic Home Laundering of Garments⁵

Method 172, Colorfastness to Non-Chlorine Bleach in Home Laundering⁵

Method 179, Skewness Change and Garment Twist in Fabrics and Garments After Automatic Home Laundering⁵

2.3 Other Documents:

A Glossary of AATCC Standard Terminology⁵

Standardization of Home Laundry Text Conditions⁵

3. Terminology

3.1 Definitions:

3.1.1 *T-shirt, n*—a knitted garment, typically constructed of jersey or 1 by 1 rib fabric, used as either an undergarment or as an outer casual top with a rib collar, hemmed sleeves and bottom, and a body configuration that resembles the letter "T".

3.1.1.1 *Discussion*—T-shirts may have either crew or v-neck styles; short or long sleeve lengths, and be adorned with appliques, embroidery, or garment printing or combinations of adornments. Henley and polo-styles shirts are excluded.

3.1.2 For definitions of other textile terms used in this standard, refer to terminology in Terminology D 123 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.

4.2 T-shirts may be subject to extra processes such as garment dyeing, garment washing, printing, application of embroidery or trims. An individual process or combination of processes may affect the performance of the final product.

¹ This practice is under the jurisdiction of ASTM Committee D-13 on Textiles, and is the direct responsibility of Subcommittee D13.61 on Apparel.

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

³ Discontinued; See 1995 *Annual Book of ASTM Standards*, Vol 07.02.

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

⁵ Available from AATCC, PO Box 12215, Research Triangle Park, NC 27709.