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Standard Tolerances for Yarns Spun on the Cotton or Worsted Systems¹

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1. Scope

1.1 These tolerances are applicable to all yarns spun on the cotton or the worsted system, either carded or combed, and composed of any fiber or mixture of fibers, except cotton tire cords and novelty or fancy yarns.

1.2 These tolerances are applicable only to yarns taken from packages, and not to yarns taken from greige or processed fabrics.

NOTE 1—For tolerances for other spun yarns, see Tolerances D2644, Methods D179 and D738, and Specifications D541 and D681.

1.3 *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:*²

D123 Terminology Relating to Textiles³

D179 Discontinued 1975; Methods of Testing Cotton Tire Cords and Cord Fabrics Made from Cotton³

D541 Specification for Single Jute Yarn³

D681 Specification for Jute Rove and Piled Yarn for Electrical and Packing Purposes³

D738 Discontinued 1972; Methods of Testing and Tolerances for Rope Made from Bast and Leaf Fibers³

D1422 Test Method for Twist in Single Spun Yarns by the Untwist-Retwist Method

D1423 Test Method for Twist in Yarns by Direct-Counting

D1578 Test Method for Breaking Strength of Yarn in Skein Form

D1907 Test Method for Linear Density of Yarn (Yarn Number) by the Skein Method

D2255 Test Method for Grading Spun Yarns for Appearance

D2256 Test Method for Tensile Properties of Yarns by the Single-Strand Method

D2257 Test Method for Extractable Matter in Textiles

D2258 Practice for Sampling Yarn for Testing

D2494 Test Method for Commercial Mass of a Shipment of Yarn or Manufactured Staple Fiber or Tow

D2644 Tolerances for Yarns Spun on the Woolen System

D4849 Terminology Related to Yarns and Fibers

3. Terminology

3.1 For all terminology relating to D13.58, Yarns and Fibers, refer to Terminology D4849.

3.1.1 The following terms are relevant to this standard: cotton system, tolerances, worsted system.

3.2 For all other terminology related to extiles, refer to Terminology D123.

4. Sampling

4.1 Take samples as directed in the applicable material specification, or in the absence of specifications, proceed as directed in Practice D2258.

5. Tolerances

5.1 *Strength*—The average breaking force of each lot shall be equal to or greater than the specified minimum.

5.2 *Yarn Number*:

5.2.1 The average yarn number of yarns spun on cotton system or the worsted system shall conform to the limits: specified value \pm 4.0 % of the specified value.

5.3 *Twist*:

5.3.1 The direction of twist in each package or end shall be S or Z, as specified.

5.3.2 In all cotton-system yarns except single yarns made of cotton, the average twist shall conform to the limits: specified value \pm 5.0 % of the specified value. In single cotton yarns, including the single yarn components of plied cotton yarns, the average twist shall conform to the limits: specified value \pm 10.0 % of the specified value. In yarns spun on the worsted system the average twist shall conform to the limits: specified value \pm 7.5 % of the specified value.

¹ These tolerances are under the jurisdiction of ASTM Committee D13 on Textiles and are the direct responsibility of Subcommittee D13.58 on Yarns and Fibers.

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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 Withdrawn.