



Designation: D6466 – 10 (Reapproved 2018)

Standard Test Method for Diameter of Wool and Other Animal Fibers By Sirolan- Laserscan Fiber Diameter Analyser¹

This standard is issued under the fixed designation D6466; 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 test method covers a procedure, using the Sirolan-Laserscan, for the determination of the average fiber diameter and the fiber diameter variation in wool and other animal fibers in their various forms.

1.2 The values stated in SI units are to be regarded as the standard.

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

1.4 *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

D584 Test Method for Wool Content of Raw Wool—Laboratory Scale

D1060 Practice for Core Sampling of Raw Wool in Packages for Determination of Percentage of Clean Wool Fiber Present²

D1776 Practice for Conditioning and Testing Textiles

D2130 Test Method for Diameter of Wool and Other Animal Fibers by Microprojection

D2252 Specification for Fineness of Types of Alpaca (Withdrawn 2018)³

D2816 Test Method for Cashmere Coarse-Hair Content in Cashmere (Withdrawn 2018)³

D3991 Specifications for Fineness of Wool or Mohair and Assignment of Grade

D3992 Specifications for Fineness of Wool Top or Mohair Top and Assignment of Grade

E126 Test Method for Inspection, Calibration, and Verification of ASTM Hydrometers

E1750 Guide for Use of Water Triple Point Cells

2.2 Federal Standards:

Official Standards of the United States for Grades of Wool, Section 31.0⁴

Measurement Method for Determining Grade of Wool, Section 31.204⁴

Official Standards of the United States for Grades of Wool Top, Section 31.1⁵

Measurement Method for Determining Grade of Wool Top, Section 31.301⁵

IWTO-8 Method of Determining Wool Fiber Diameter by the Projection Microscope⁶

IWTO-12 Measurement of the Mean and Distribution of Fibre Diameter Using the Sirolan-Laserscan Fibre Diameter Analyser⁶

3. Terminology

3.1 For all terminology relating to D13.13, Wool and Wool Felt, refer to Terminology D4845.

3.1.1 The following terms are relevant to this standard: *average fiber diameter*, *grade*, and *snippet*.

3.2 For definitions of other textile terms used in this test method, refer to Terminology **D123**.

4. Summary of Test Method

4.1 This test method describes procedures for sampling various forms of wool, the reduction of the sample to small test

¹ This test method is under the jurisdiction of ASTM Committee **D13** on Textiles and is the direct responsibility of Subcommittee **D13.13** on Wool and Felt.

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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 *Federal Register*, Vol 30, No. 161, Aug. 20, 1965, pp. 10829–10833.

⁵ *Federal Register*, Vol 33, No. 248, Dec. 21, 1968, pp. 19073–19076.

⁶ International Wool Textile Organization, International Wool Secretariat, Commercial Development Department, Valley Drive, Ilkley, LS298PB, England.