



Standard Specifications for Fineness of Wool Top or Mohair Top and Assignment of Grade¹

This standard is issued under the fixed designation D3992; 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.

^{ε1} NOTE—The terminology section was updated in July 2012.

1. Scope

1.1 These specifications are applicable in the classification, by fineness grade, of the fiber in wool top, mohair top, wool yarns, mohair yarns, wool fabrics, and mohair fabrics of the worsted type.

NOTE 1—For fineness specifications for wool, mohair, and alpaca, refer to Specifications [D3991](#) and [D2252](#).

2. Referenced Documents

2.1 *ASTM Standards*:²

[D123 Terminology Relating to Textiles](#)

[D2130 Test Method for Diameter of Wool and Other Animal Fibers by Microprojection](#)

[D2252 Specification for Fineness of Types of Alpaca](#)

[D3991 Specifications for Fineness of Wool or Mohair and Assignment of Grade](#)

[D4845 Terminology Relating to Wool](#)

2.2 *Federal Standards*:

[Official Standards of the United States for Grades of Wool Top, Section 31.100](#)³

[Measurement Method for Determining Grade of Wool Top, Section 31.301](#)³

[Official Standards of the United States for Grades of Mohair Top, Section 32.100](#)⁴

[Measurement Method for Determining Grade of Mohair Top, Section 32.302](#)⁴

3. Terminology

3.1 For all terminology related to D13.13, refer to Terminology [D3991](#).

¹ These specifications are under the jurisdiction of ASTM Committee [D13](#) on Textiles and are the direct responsibility of Subcommittee [D13.13](#) on Wool and Felt. Current edition approved July 1, 2012. Published August 2012. Originally approved in 1981. Last previous edition approved in 2006 as D3992 – 94 (2006). Replaces D472 and D1381. DOI: 10.1520/D3992-94R12E01.

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

⁴ *Federal Register*, Vol 38, No. 4, Jan. 8, 1976, pp. 964–967.

3.1.1 The following terms are relevant to this standard: average fiber diameter, fineness, grade, mohair, top, wool.

3.2 For all other terminology related to textiles, refer to Terminology [D123](#).

4. Requirements

4.1 The grade of wool top shall conform to [Table 1](#).

4.2 The grade of mohair top shall conform to [Table 2](#).

5. Significance and Use

5.1 These specifications are considered satisfactory for classifying wool top or mohair top by grade and provide a basis for acceptance of commercial shipments.

6. Test Method

6.1 Test the material as directed in Test Method [D2130](#). Measure at least the minimum number of fibers needed to attain confidence limits of the mean within $\pm 0.4 \mu\text{m}$ at a probability level of 95 % (see Annex A1 of Test Method [D2130](#)).

7. Assignment of Grade

7.1 Compare the observed average fiber diameter and fiber diameter distribution, determined as directed in Section 6, with the specifications for the various grades for the material being tested in [Table 1](#) or [Table 2](#). Assign the grade that corresponds to the average fiber diameter and fiber diameter distribution requirements specified in [Table 1](#) for wool top or [Table 2](#) for mohair top. If the observed average diameter and fiber diameter distribution correspond to a single grade, assign that grade. If the fiber diameter distribution does not meet the requirements for the grade to which the average fiber diameter corresponds, assign a dual grade designation, the second designation being one grade coarser than the grade to which the average fiber diameter corresponds. Assignment of grade is illustrated by the examples in [7.1.1](#) and [7.1.2](#).

7.1.1 *Wool Top*:

7.1.1.1 *Example 1*—Average fiber diameter, 28.10 μm ; fiber diameter distribution; 30.0 μm and under, 64 %; 30.1 μm and over, 36 %; 50.1 μm and over, 1 %; grade designation, 56s.