



Standard Practice for Assigning a Standard Commercial Moisture Content for Wool and its' Products¹

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1. Scope

1.1 This practice recommends that a single value be adopted for the commercial moisture content of wool in any of the following forms:

- 1.1.1 Scoured,
- 1.1.2 Carbonized and neutralized,
- 1.1.3 Noils, uncarbonized,
- 1.1.4 Top, oil or dry combed,
- 1.1.5 Yarn, worsted,
- 1.1.6 Yarn, woolen,
- 1.1.7 Yarn, hand knitting, or
- 1.1.8 Fabric.

1.2 *Limitations*—Grease wool, pulled wool, and wool with pH below 5.0 are excluded from this practice.

1.3 *This standard does not purport to address 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 584 Test Method for Wool Content of Raw Wool—Laboratory Scale²
 - D 1909 Table of Commercial Moisture Regains for Textile Fibers²
 - D 2720 Practice for Calculation of Commercial Weight and Yield of Scoured Wool, Top, and Noil for Various Commercial Compositions²

3. Terminology

3.1 Definitions:

3.1.1 *commercial moisture content, n—in wool*, the moisture calculated as a percentage of the mass of the wool, top, noils, yarn, fabric, so forth, in the “as-is” condition; that is, containing whatever moisture, oil, grease, or other extraneous matter that may be present.

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

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

3.1.2 *wool, n*—the fibrous covering of the sheep, *Ovis* species.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *carbonized and neutralized wool*—a term descriptive of scoured wool processed to destroy cellulosic impurities by treating with a mineral acid or an acid salt, drying and baking, crushing, and dusting out the embrittled cellulosic matter followed by neutralization of the acidified wool.

3.2.2 *commercial moisture content*—for the purposes of this practice, the moisture calculated as a percentage of the weight of the wool, top, noils, yarn, fabric, etc., in the “as-is” condition; that is, containing whatever moisture, oil, grease, or other extraneous matter that may be present.

3.2.2.1 *Discussion*—The term “moisture regain” as defined in Terminology D 123, leads to certain difficulties in defining the clean wool basis for calculation, which do not occur when the term “moisture content” is used. Moisture content can be applied directly to the product in the as-is condition while moisture regain cannot.

3.3 For the definition of wool and other textile terms used in this practice, refer to Terminology D 123.

4. Significance and Use

4.1 The purpose of this practice is to bring about uniformity of commercial moisture standards in all ASTM specifications relating to wool and its products.

4.2 This practice provides a recommended single value for a standardized commercial moisture content for wool and its products. This avoids difficulties encountered in calculating the amount of moisture-free fiber present in a given mass of wool in any one of the forms listed in 1.1.1 to 1.1.8 due to trade practices which recognize various commercial moisture allowance values used by certain segments of the trade. (See Test Method D 584, Section 3.5, Table D1909, Note E, and the Tables in Practice D 2720).

4.3 The recommended commercial moisture content should be used where it is desirable to avoid problems in determining moisture-free fiber content when the form of the wool is changed. For example: from scoured wool (12.0 % moisture content) to worsted yarn, dry spun (13.04 % moisture content).

5. Recommended Commercial Moisture Content

5.1 Use 12.0 % as the commercial moisture content for

wool and its products.

NOTE 1—For other commercial regain values commonly used for wool in various forms, refer to Table 1 in Table D1909, Table 1 in Practice D 2720, and Note 1 in Test Method D 584.

5.2 The value of 12.0 % has been assigned as the commercial moisture content for the following reasons:

5.2.1 A moisture content of 12.0 % is approximately equal to 13.6 % moisture regain which has been listed as the

American Moisture Regain specification for scoured wool.³

5.2.2 A moisture content of 12.0 % is the basis for the assessment of duty on the importation of raw wool into the U.S.⁴

³ *American Wool Handbook*, Second edition, Table 17, p. 157.

⁴ Tariff Schedules of the United States of America, Schedule 3, Part 1, Subpart C, Headnote 1(c).

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