



Designation: D 2475 – 00

Standard Specification for Felt¹

This standard is issued under the fixed designation D 2475; 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 specification covers all standard types of felt in the form of rolls and sheets that are suitable for mechanical use. Certain special-purpose felts are also covered.

1.2 This specification is not applicable to felt-like products that utilize weaving, knitting, stitching, or bonding such as papermaker's felt.

1.3 Trade practice in the felt industry deals in pounds, yards, and inches, therefore the values stated in inch-pound units are to be regarded as standard. The values in SI units are provided as information only.

1.3.1 The specification referenced in 2.2 uses only inch-pound units.

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles²

D 461 Test Methods for Felt²

D 4845 Terminology Relating to Wool³

2.2 Federal Standard:

C-F-206, Felt Sheet: Cloth Felt, Wool, Pressed⁴

2.3 Felt Manufacturers Council:

FS14-68/71 Wool Felt Standard Specifications⁵

2.4 SAE Standard:⁶

J314b Felts-Wool and Part Wool

3. Terminology

3.1 Definitions:

3.1.1 *felt, n*—a textile structure characterized by interlocking and consolidation of its constituent fibers.

3.1.2 *machined felt, n*—a felt structure achieved by the interaction of a suitable combination of mechanical energy, chemical action, moisture and heat causing the constituent fibers to migrate and interlock.

3.1.3 *needled felt, n*—a structure composed entirely of fibers physically interlocked and reoriented through the action of felting needles.

3.1.4 For standard terminology relating to wool, refer to Terminology D 4845.

3.1.5 For definitions of other textile terms used in these test methods, refer to Terminology D 123.

3.1.5.1 *Discussion*—For the purpose of this document, there are only two types of felt, machined and needled. All other terms alluded to as types of felt, such as papermakers, black, unsupported, supported, part wool, wool, etc. are considered to be simply terms describing attributes of these two types of felts.

3.1.6 *relative density, n*—the ratio of the mass of a volume of felt to the mass of an equivalent volume of water, alternatively, use density.

4. Types of Felts

4.1 ASTM Classification:

4.1.1 The ASTM Classification number in Tables 1-3 is the percent specific gravity of that class. It may be computed from the mass (weight), thickness, and area values in these tables. This number is followed by the letter R or S, which designates the method of manufacture as roll or sheet form, respectively. The last digit is the overall quality index in decreasing order of quality from one to four (see Note 1).

⁶ Available from the Society of Automotive Engineers, 2 Pennsylvania Plaza, New York, NY 10001.

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

Current edition approved Nov. 10, 2000. Published February 2001. Originally published as D 2475 – 65 T, replacing D 114. Last previous edition D 2475 – 88 (2000).

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

³ *Annual Book of ASTM Standards*, Vol 07.02.

⁴ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

⁵ Available from the Northern Textile Association, 230 Congress Street, Boston, MA 02110.